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SAFETY and HEALTH in MINES

The Rise of Bureaucracy in the Coal Mining Industry
and its Results as Evidenced by the Public Inquiry into
an Accident at Houghton Main Colliery.

A thesis presented

by

Douglas Bernard Owen

to

The Department of Safety and Hygiene

in fulfilment of the requirements

for the

Degree of Doctor of Philosophy.

The University of Aston in Birmingham

February 1978

SYNOPSIS

SAFETY and HEALTH in MINES

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This thesis is concerned with certain aspects of the Public Inquiry into the accident at Houghton Main Colliery in June 1975. It examines whether prior to the accident there existed at the Colliery a situation in which too much reliance was being placed upon state regulation and too little upon personal responsibility.

I study the phenomenon of state regulation. This is done (a) by analysis of selected writings on state regulation/intervention/interference/bureaucracy (the words are used synonymously) over the last two hundred years, specifically those of Marx on the 1866 Committee on Mines, and (b) by studying Chadwick and Tremenhoe, leading and contrasting "bureaucrats" of the mid-nineteenth century.

The bureaucratisation of the mining industry over the period 1835-1954 is described, and it is demonstrated that the industry obtained and now possesses those characteristics outlined by Max Weber in his model of bureaucracy. I analyse criticisms of the model and find them to be relevant, in that they facilitate understanding both of the circumstances of the accident and of the Inquiry.

Further understanding of the circumstances and causes of the accident was gained by attendance at the Inquiry and by interviewing many of those involved in the Inquiry.

I analyse many aspects of the Inquiry - its objectives, structure, procedure and conflicting interests - and find that, although the Inquiry had many of the symbols of bureaucracy, it suffered not from "too much" outside interference, but rather from the coal mining industry's shared belief in its ability to solve its own problems. I found nothing to suggest that, prior to the accident, colliery personnel relied, or were encouraged to rely, "too much" upon state regulation.

BUREAUCRACY:

ACCIDENT:

MINE:

PUBLIC INQUIRY.

CONTENTS

	Introduction	1
Chapter 1	An Unwelcome Intervention	12
II	Analysis of the Concept of Power	20
III	Criteria for Holding a Public Inquiry	31
IV	Bureaucracy and State Intervention - an historical perspective	34
V	Two Individuals, two Reports and two Philosophies	
	(a) Chadwick	48
	(b) Tremeneere	57
VI	Bureaucracy : the mid-nineteenth century debate	71
VII	Bureaucracy and Marx	75
VIII	Bureaucracy and Weber	84
IX	The Move to Bureaucracy in the Mining Industry 1835-1954	92
X	"The Unanticipated Consequences of Purposive Social Action"	103
XI	The Mines Inspectorate	116
XII	The Procedure of the Inquiry	127
XIII	Inequitable Representation of Individuals at the Inquiry	142
XIV	The Role of Workmens' Inspectors	151
XV	The Role of the Deputy in Relation to the Accident	155
	Conclusions	165
	Appendices	176
	Bibliography	182

INTRODUCTION

On 12th June 1975 five miners died as the result of an accident on the afternoon shift at Houghton Main Colliery, South Yorkshire. A Public Inquiry into the causes and circumstances of this accident was held, at Barnsley Town Hall, from Tuesday, 26th August until Thursday, 4th September 1975. It is with certain aspects, both of the accident and of the Inquiry, that this thesis is concerned.

AIMS OF RESEARCH

The Robens Report¹ contains the statement that "...our present (industrial) system encourages rather too much reliance on state regulation, and rather too little on personal responsibility and voluntary, self-generating effort. This imbalance must be redressed".² ("System", in this context, is defined as "...the whole complex of arrangements and activities, whether of a statutory or voluntary nature, which seek to protect and promote the safety and health of people at work...".)³

My original intention was to explore the applicability of the Robens statement in relation to the coal-mining industry. To this end I made weekly visits to Lea Hall Colliery, Staffordshire, principally in order to observe underground officials at work and to enquire into their attitudes towards safety. At the same time, because state regulation is an integral part of the statement which I examine, the

1 Cmnd 5034

2 op. cit. para. 28, p7

3 op. cit. para. 15, p2

ideas of the more modern thinkers about state intervention¹ were analysed. Necessarily this involved an examination of the growth of bureaucracy² in the mining industry, a growth which was not only conditioned by ideas of state intervention but which also influenced such ideas. This analysis has been limited to the period following the beginnings of the Industrial Revolution (c.1750-1770), which coincided with, and was a spur to, the process of rationalisation/bureaucratisation.

The research had been in progress for about two years when the accident occurred at Houghton Main Colliery. The subsequent Public Inquiry provided a fortuitous opportunity to explore, through the medium of official evidence, whether the imbalance of which Robens complained held true of the Houghton Main Colliery prior to the explosion.

At the time of the Inquiry into the Houghton Main accident, Atherley and Booth were commenting on the Flixborough Public Inquiry³. They criticised that Inquiry for having over-concentrated on the immediate causes of the accident and having paid inadequate attention to the circumstances of the accident. As an extension of my study, I was interested to see whether the Houghton Main Colliery Public Inquiry would exhibit a similar pattern.

After attending the first few days of the Inquiry, I predicted that its nature was such that 'not all the relevant circumstances of the

1 In this thesis the terms 'state regulation', 'state intervention' 'state interference' and 'bureaucracy' are often used synonymously. Each describes the same phenomenon, but in certain contexts and because of difference emphasis, one is usually more suitable than the others.

2 'Bureaucracy', a concept invariably used in juxtaposition to that of 'power', can exist in other than state-regulated organisations. 'Bureaucracy' embraces various further concepts, none of which needs to be used in any disparaging sense.

3 Sunday Times, 14th September 1975, p61

accident would be investigated'.¹ I felt it was my duty to respond to the Commissioner's invitation to offer comments and I thus sent to him a letter in which I made this prediction.

Although the Robens Report, with its criticism of the system, had only recently been published, the Inquiry, in its investigation of the causes and circumstances of the accident, did not consider the Robens statement or any parallel concepts. I looked for an explanation of this surprising omission, and concluded that it resulted from the very nature of the Inquiry. I concluded, even at this early stage, that examination of the Inquiry's nature, as well as the applicability of the Robens statement, was important.

Therefore, the most important questions for research became:

- (a) the applicability of the Robens statement to Houghton Main Colliery prior to the accident,
- (b) the nature of the Inquiry.

SCOPE

The scope of this thesis is encompassed in the sub-title - The Rise of Bureacracy in the Coal Mining Industry and its Results, as Evidenced by the Public Inquiry into the Accident at Houghton Main Colliery. The thesis is intended to be an interdisciplinary analysis of some of the important aspects of the modern coal mining industry as mirrored in the Inquiry.

APPROACH

It is only right that I should adopt an interdisplinary approach because one of the central and recurring criticisms contained in this thesis is of the approach adopted by the Inquiry, in that it lacked

1 Extract from letter, see p13 below

the ability to penetrate beyond the confines and constraints imposed by the background and training of the participants. Although I have a similar background and training, in mining engineering and industrial engineering, and in geology, disciplines helpful in providing a necessary understanding of the industry, I suggest that only by the adoption of an interdisciplinary approach is it possible to comprehend all the aspects involved in the Inquiry, as well as in the accident.

The disciplines with which I am concerned in this thesis include industrial sociology, history, philosophy, political science and economics. While some of those expert in each of these disciplines might regard the study of these topics as their own prerogative, the particular practical problem tackled in this research does not have convenient academic boundaries.

METHOD OF GATHERING DATA

Information used in the writing of this thesis has been gathered over a number of years, beginning in 1972-73 (before the accident). Of direct import for the research presented in this thesis are the following:

1. I made weekly underground visits to Lea Hall Colliery, over a period of six months, for the purposes of observing underground officials at work and enquiring into their attitudes towards safety. (This fieldwork was invaluable in the preparation and conduct of the interviews carried out with officials in the Barnsley Area, and the experience also enabled me to adjust to a coal mining industry changed from that in which I had worked as an underground official prior to 1960, when I left to take up a post in metalliferous mining in Ghana.)
2. I attended the Colliery Safety Committee Meetings and Colliery Management Production Meetings at Lea Hall during the same period and for the same purpose, i.e. to further my knowledge of the then current

safety practices. In 1973, I gained a current First Aid Certificate by completing a course at the Cannock National Coal Board Training Centre. In addition to its obvious value, this enabled me to further identify with junior officials who were also retaking their certificates.

3. I attended meetings and social gatherings of the Institution of Mining Engineers, and read the professional journals, so that I was able to keep abreast of the current professional concerns.

4. I took copious notes at the proceedings of the Houghton Main Colliery Inquiry, initially only as part of my general study.

5. I conducted extensive research, by interview, into the attitudes of many of those involved in the Inquiry, whether witnesses, representatives of interested parties, workmates or relatives of the deceased, employees of neighbouring collieries or other concerned observers. I also interviewed the Commissioner.

6. I took part in discussions at the "Symposium on Health, Safety and Progress" at Harrogate (organised by the Institution of Mining Engineers in October 1976) and also, outside the formal proceedings, exchanged views with Sir Andrew Bryan (a former H.M. Chief Inspector of Mines and Quarries) and Mr. J.L. Collinson (the Chief Safety Engineer, National Coal Board), as well as with Inspectors of Mines from various divisions, with colliery managers and other National Coal Board officials, and with official representatives of the National Union of Mineworkers. (Although invited, there were no representatives of the National Association of Colliery Overmen, Deputies and Shotfirers.)

7. On 26th January 1977 I presented a working paper entitled 'Some Organisational Aspects of a Public Inquiry' to a staff seminar of the Department of Behaviour in Organisation at Lancaster University. Their criticisms and suggestions, especially as to further reading, have proved useful.¹

1 Each of the above activities complemented each other and

Continuation of Footnote from page 5

facilitated my acceptance by the community of South Yorkshire. This enabled me both to gain the confidence of those whom I interviewed and to associate with the concerns of the community. This association in turn developed into a close involvement, especially with some of the relatives of the deceased. At the same time, however, my fifteen years absence from direct employment within the coal mining industry enabled me to be more reflective and more detached than might otherwise have been the case.

My underground visits to Lea Hall were especially important in that they provided me with a new and deeper understanding of the attitudes of junior officials, and in particular of how they defined a "good" official - an understanding of which is central to this thesis. These visits confirmed my opinions, for example, of the parochiality of the coal mining industry (see p 135) and of the comparative lack of prestige of Workmen's Inspectors compared with HM Inspectors. My observations of custom and practice in the Cannock Area (pp 112-113, both text and footnote) increased my awareness of the generality of behaviour in such things as filling in of reports (p 168) and thus enabled me to ask pertinent questions of South Yorkshire personnel. Opinions gleaned from interviewing a small sample of South Yorkshire officials confirmed conclusions already arrived at through more extensive field work in South Staffordshire. The specific attitudes of officials to their job responsibilities, to their responsibilities for younger miners and to the production dilemma with which they are faced (see pp 155-157), were identical. Nor was there any marked difference in the acceptance of a deputy's authority by miners (p 86), or in the National Union of Mineworkers' desire to expose inadequacies in management officials. (p 140 and p 149).

The Committee Meetings at Lea Hall provided me with an insight of the problems which confront more senior colliery officials. Similarly, by attending meetings of the Institution, I came into contact with the views of professional engineers in general, and the Inspectorate in particular. The Harrogate Symposium brought me into further contact with this section of the industry and formed a useful forum for interchange of ideas. The relevance of attendance at these meetings is, for example, evidenced on p 116.

ISSUES INVOLVED IN THE STUDY

There are four issues involved in the study. These appear as intertwined and closely-linked strands:

- (a) state regulation/bureaucracy,
- (b) the history of bureaucratisation of the mining industry,
- (c) the nature of the Houghton Main Public Inquiry,
- and (d) the circumstances at Houghton Main Colliery prior to the accident.

(a) State Regulation/Bureaucracy

I have included analyses of seminal writers such as Adam Smith, writers whose ideas and slogans still condition contemporary thinking about state intervention/bureaucracy. Their views, which were instrumental in influencing the degree of rationalisation/bureaucratisation in the period following their writings, provide understanding, even now, of problems which form part of the continuing debate on state intervention. The application of their concepts to my analysis of the Inquiry produced new insights, which I have included because they pointed my research in new directions. Some of these insights remain only hypotheses and none has been included as "proof".

Within the account and analysis of those philosophies which I discuss are included, in their chronological setting, case studies of Chadwick and Tremenheere, both of whom translated their adopted and contrasting philosophies into action. Chadwick (the protégé of Bentham) and Tremenheere (whose Whig philosophy is shown to have been largely inherited from Burke) are both highlighted because they translated into actuality (i.e. into legislation) the process of bureaucratisation, Chadwick's influence being general, while Tremenheere's was especially important to the mining industry. In these case studies the methodology adopted was that of the historian.

Having learnt from Finer's biography of Chadwick how to apply this methodology, I used primary sources such as parliamentary papers, as well as biographical information, to analyse Tremenheere's philosophy about state intervention in the mining industry, specifically in relation to the working of the Mines Act of 1842.

Marx, a contemporary of Chadwick and of Tremenheere, though prior to 1848 (the "year of revolutions" and the date of publication of the Communist Manifesto) less influential than either, used an inquiry (that of the Select Committee on Mines of 1866) to illustrate some of his ideas concerning state intervention/bureaucracy. It is interesting to note that I consulted Marx in search of a concept of bureaucracy to apply to a mining Inquiry, and I found that he had in fact used a mining Inquiry to exemplify his concept of bureaucracy. I compared the bureaucratic features of the 1866 Inquiry, as described by Marx, with those of the 1975 Inquiry, and I show that the 'special myths and symbols', and the other trappings of bureaucracy of which Marx wrote, were apparent in the Barnsley Town Hall 'court-room' setting.

(b) The Bureaucratisation of the Mining Industry

By using a case study drawn from the Inquiry (that of a miner's acceptance of the authority of the deputy) I examine the legitimacy of the orders from deputy to miner in the light of Weber's concept of 'legal rational authority'. During this examination I list the prerequisites and the characteristics of Weber's bureaucracy, from which basic model most organisational analysts have drawn their initial impetus. I then describe the bureaucratisation of the mining industry over the period 1835-1954, in order to demonstrate that the industry obtained, and now possesses, those characteristics of bureaucracy which Weber outlined in his model. Writers have criticised this model and have asserted that the strict adoption of its defining characteristics

would have unanticipated consequences, some of which would be detrimental to administrative efficiency. Since the mining industry displays the characteristics of Weber's model as a part of the system '...to protect and promote the safety and health of people at work', I analysed criticisms of the model and found them to be relevant, not only to an understanding of the Inquiry but also to a greater understanding of the circumstances of the accident.

(c) The Nature of the Public Inquiry

I start the thesis by presenting, in full, the correspondence which passed between me and the Commissioner of the Inquiry. I was interested in analysing why my letter had totally failed to achieve my objective, i.e. to contribute, at the Commissioner's general request, what I considered helpful suggestions as to how the Inquiry could best ascertain "all the facts which might have (had) a bearing on the accident". In my letter of 31.8.1975 I offered 'advice' manifestly unacceptable to the Commissioner.

It was some time later, during the course of my research, that I distinguished between events as they are and events as they might more profitably be. Only after analysis of the Inquiry according to ideas expressed by industrial sociologists, and after interviews with concerned individuals, e.g. relatives of the deceased, about their expectations of the Inquiry, did I come to the conclusion that I had been naive about the purposes of the Inquiry. I had misled myself by accepting, at face value, the statement concerning "the importance of ascertaining all the facts which might have a bearing on the accident"¹. This led me to believe that any other aim (such as maintaining, without

1. See Commissioner's speech p12 below.

criticism, the dignity of representatives of interested parties) would be of subsidiary importance. I also mistakenly believed that my ideas of what "might have a bearing on the accident" were value-free and would be readily accepted by the Commissioner.

I faced the problem of imputing some kind of motivation to the various individuals appearing at the Inquiry. Obviously their involvement in the Inquiry or their concern with the outcome prevented me from directly asking individuals about their motives. In addition, I could hardly expect a sympathetic response from those whom I was likely to criticise, and therefore I abandoned attempts to relate comments and actions to personal motivations, unless these were so overtly stated as to be unambiguous. Instead I relied upon demonstrating the possible power resources (or interests) involved in the establishment and conduct of the Inquiry.

The administrative regulations which governed this Inquiry were new. However, in terms of its stated intentions, organisation and procedures, I show that the Inquiry differed little from previous practice. The Commissioner, in the person of the Chief Inspector of Mines and Quarries, formally defined the aims of the Inquiry as being to ascertain "all the facts which might have a bearing on the accident...", and his remark that "no-one is being brought here charged with an offence"¹ served to emphasise the objective of a dispassionate and thorough investigation of the truth. I examine the extent to which the format of the Inquiry and the orientation of the participants facilitated or constrained such an open statement of aims.

1. See Commissioner's opening remarks, p129.

Despite the opening statement concerning the non-punitive nature of the Inquiry, many witnesses clearly felt that they were "on trial", and this is how many in the gallery audience interpreted what they were watching. Some witnesses were represented better than were others. This was due to the existence of collective interests which were not necessarily in accord with individual interests. (The courtroom skills of the representatives also varied.) The identification of conflict between individual and collective interests led me to consider in more detail relevant parts of the Utilitarian philosophy. This analysis is included in the thesis.

I found it useful to view the Inquiry as a process of negotiation of responsibility for the accident. The immediate cause of the explosion was the ignition of an accumulation of firedamp, in a development heading, caused by the switching on of a defective fan. Although other suggestions about the cause of the explosion were explored during the Inquiry the cause of the explosion as outlined in the official report is not questioned here. At issue in the Inquiry was the question of how such an event as the explosion came to occur, an issue which necessarily reflected directly upon the activities and responsibilities of all involved at the Colliery. Within broad principles which dictate the acceptability of evidence or opinion, there exists not one truth but a multiplicity of possible truths. Whether a certain 'truth' emerges of necessity depends, among other things, upon the choice of topics considered. The Inquiry neglected to examine "custom and practice" in relation to rule observance, or the special problems faced by deputies in attempting to marry safety and production. Also omitted was any suggestion that members of the Mines Inspectorate be held accountable for their role prior to the accident or that a change in their role might prevent similar accidents. Similar issues concerning Workmen's Inspectors

were also neglected. That the Inquiry disregarded such topics determined the character of the emergent truth.

Which of the characteristics of the Inquiry determined the 'truth' as it emerged in the official Report of the Inquiry? This study shows that 'tradition' dominated the membership and conduct of the Inquiry. This limited the range of possible explanatory models. A general mining culture further served to blinker participants and to prevent them from considering alternative models. This culture also encouraged an essentially 'technical' interpretation, which emphasised the role of 'human error', rather than a cultural or administrative interpretation.

(d) The Circumstances at Houghton Main Colliery Prior to the Accident.

I offer an alternative reconstruction of the action of the men who switched on the fan which initiated the explosion. This explanation corresponds well with the National Coal Board's submission as to the men's experience and conscientiousness. My explanation of events better correlates with the attitudes of experienced and conscientious 'pitmen' whom I interviewed in the Barnsley area, and with attitudes encountered during my earlier studies.

CHAPTER IAN UNWELCOME INTERVENTION

The Commissioner opened the Public Inquiry into the accident at Houghton Main Colliery with a speech. In that speech he made the following observation and request:

"My first thoughts must be directed to the importance of ascertaining all the facts which might have a bearing on the accident ...If there is anyone listening to or reading reports of the evidence, but who feels he has something to offer, I invite him to come forward and to do this through either the representatives of the interested parties or through any of the officials of the court".¹

In response to the Commissioner's invitation I sent the following letter on Sunday 31st August 1975, after the Inquiry had been in progress for five days:

Tutbury, 31.8.1975

"Dear Mr. Commissioner,

I am concerned that the procedure being used at the investigation up to the end of last Friday's hearing (I was not present in the court on Saturday) is in my opinion, such that, although the direct causes of the accident may be thoroughly investigated, not all the relevant circumstances of the accident will be investigated and the maximum amount of lessons learnt from the Inquiry.

During the Inquiry Mr. Hermes Nicholas has demonstrated outstanding ability in leading for the Health and Safety Executive. It is also evident that H.M. Inspectors of Mines have been extremely thorough in the investigation of this accident.

However, what has not been investigated so far, and for reasons discussed below probably will not be investigated as thoroughly as I believe desirable, is the role of the Inspectors in preventing circumstances arising which lead to unnecessarily hazardous operations.

1 From the Commissioner's opening remarks on Tuesday 26th August, the opening day of the Inquiry. Contained also in the Health and Safety Executive's official press release on that first day of the Inquiry.

As one example (among others), Mr Nicholas was able to demonstrate most clearly that the reporting procedures in several cases were not working as they were intended. I am well aware that an Inspector would be unable to read every report, but one would expect the District to have a systematic sampling scheme in operation which would detect breaches of regulation which have become 'custom and practice'.

I would suggest that at a Public Inquiry such as this, the policy of the Mines Inspectorate, the organisation and arrangements for the time being in force for carrying out that policy, ought to be examined as critically as say the arrangements of the Mechanical Engineering Department of Houghton Main Colliery. It is unlikely that any individual within the mining industry would take it upon himself to criticise in any way the Mines Inspectorate publicly.

It is generally accepted that the Inspectorate has superior knowledge and expertise, to which an individual will defer; and it is also accepted within the industry that it is in some sense 'right' to defer to the Inspectorate, and in the proper order of things. Interested Parties may also feel that they are in a particularly vulnerable position to criticise an organisation with so much power.

It seems to me necessary that an independent examiner of stature should investigate, question and further question the members of the local Inspectorate publicly in order to discover whether there are lessons to be learnt."

On 3rd September 1975 the Commissioner replied to my letter as follows:

Health and Safety Executive
Barnsley. 3rd September 1975.

"Dear Sir,

You sent me by hand in an unsealed envelope a manuscript letter dated 31st August 1975.

I expect persons who state that "...not all the relevant circumstances of the accident will be investigated and the maximum amount of lessons learnt from the inquiry" to attend all the hearings and hear all the evidence before reaching such conclusions.

By stating that it is "necessary that an independent examiner of stature investigate, question and further question the members of the local Inspectorate publicly in order to discover whether there are lessons to be learnt" you have made serious allegations not only regarding my competence, impartiality and integrity but you have also cast grave doubts on the freedom of expression and intelligence of all the interested parties who were consulted and agreed at every stage in the arrangements regarding who should be called and how the Inquiry should be conducted. Study of previous Public Inquiries clearly shows that Mines and Quarries Inspectors give evidence and that they are subject to the most

searching questions as I know from personal experience.¹
For these reasons I cannot agree with the views
expressed in your letter".

OBJECTIVITY AND OBJECTIVES

I had written to the Commissioner of the Public Inquiry, as a member of the public, in the belief that a change in the procedure of the Inquiry was necessary if the given objective (of "ascertaining all the facts which might have a bearing on the accident" and investigating the "causes and circumstances of the accident") was to be more effectively attained. In suggesting that the aims of the Inquiry would be better met by introducing an independent examiner, I had recommended a course of action clearly unacceptable to the Commissioner. In order to discover why this should have been so, I decided to analyse the social processes involved in the Inquiry, using for this analysis some of the concepts contained in the literature of organisation theory.

It is appropriate to use the body of knowledge known as organisation theory in relation to the Public Inquiry since the Inquiry fulfills the requirements laid down in an orthodox definition of an organisation, that given by Blau and Scott:

"What they (organisations) have in common is that a number of men have become organised into a social unit - an organisation - that has been established for the explicit purpose of achieving certain goals".²

There is authoritative support for this definition from many writers.

1 My examination of the "Seafield Colliery Accident Public Inquiry Proceedings" held at Kirkcaldy on Wednesday 15th August 1973 (the sixth day of the Inquiry) did confirm that Inspectors were indeed asked searching questions. However, these questions were part of a debate about the technical causes of the accident, and the technical difficulties of supporting steep seams. There were no questions concerning the policy of the Inspectorate, nor the arrangements for carrying out that policy.

2 Peter M. Blau and W. Richard Scott (1970) p1

For example:

"As a formal analytical point of reference, primacy of orientation to the attainment of a specific goal is used as the defining characteristic of an organisation which distinguishes it from other types of social systems".¹

and:

"Organisations are social units (or human groupings) deliberately constructed and reconstructed to seek specific goals".²

The generally accepted definitions of "an organisation" assume that an organisation exists to further certain stated or implied primary objectives. The existence of these primary objectives might lead an observer to neglect a number of secondary objectives and constraints and therefore to offer a prescription unacceptable to members of the organisation.

There are ample written warnings and criticisms of the dangers of focusing attention on specific goals. For example, Albrow cites the case of the work of Elton Mayo at the Western Electric Company's Hawthorne Works in Chicago as a cautionary tale about such an approach.³ Mayo used the results of his studies to provide empirical foundations for certain recommendations to industrial management. There are other criticisms of what is generally known as the 'Human Relations School',⁴ but the one on which I wish to lay particular emphasis is Albrow's contention that no objective is "given" in isolation from other objectives:

1 Talcott Parsons (1960) p17 Quoted by Martin Albrow (1973) pp 146-147.

2 Amitai Etzioni (1964) p3

3 M Albrow (1973) p398

4 For example: Henry A Landsberger (1961)

"The limits on the attainment of an objective are set not only by the availability of means, but also by criteria which determine what means are acceptable. These criteria frequently stem from goals which are independent of the objectives from which the analysis began".¹

A further danger exists in that this approach distorts and narrows one's understanding of the politics and personal relationships that must necessarily play such an important part in any Public Inquiry. Equally erroneous is the tendency to recognise secondary objectives and constraints, only to minimise their significance. There can be confusion between accepting primary or given objectives and being "objective". Neither the acceptance of primary objectives nor the minimising of secondary objectives can therefore be value free.

The specific goal or objective of the Inquiry, as laid down by the Commissioner, I felt was self-evident. I assumed that my search for a more effective way of reaching this objective (i.e. of ascertaining all the facts which might have (had) a bearing on the accident) was value free, an assumption discussed below. I did, however, realise that, in attending the Inquiry, I had objectives other than that outlined by the Commissioner and that my concept of a 'good' Inquiry would be influenced by those factors. For instance, I was undeniably curious to see whether the predictions made in my letter to the Commissioner about the course of the Inquiry would be proved correct. Had attention been paid to the content of that letter it might have invalidated these predictions by causing a change in the procedure. There was a further constraint, in that I knew that my

¹ M. Alhrow (1973) p398

comments would be unpopular and that my criticism could well damage future relations between me and H.M. Inspectors of Mines and Quarries. In casting aside these rather obvious personal considerations and accepting the objectives of the Public Inquiry as "given", I believed (at that time) that I was dealing with "value free" objectives. I was also making the assumption that members of the Inquiry should and would ignore secondary objectives and personal constraints, in order that the specific objective should be reached more effectively.

Another view of the objectives of an Inquiry is that provided by the historian MacDonagh in his analysis of early inquiries into mining accidents, viz. that "they (the inquiries) helped to ward off criticism of the government for doing nothing by suggesting that the whole matter was sub judice, and even comment consequently improper".¹

INDICATIONS OF VIEWS CONCERNING THE OBJECTIVES OF THE INQUIRY

Mr Copperwheat, father of one of those killed in the accident, said that "if this inquiry can stop someone else getting killed it (the Inquiry) will all be worthwhile".² An N.U.M. administrator was very anxious to establish that it was "still possible to get a Public Inquiry held under the new Act".³ The remarks of a sister of another man killed in the accident leave no doubt that she wanted

1 O.O.G.M. MacDonagh (1967) p70

2 Mr Copperwheat was in the public gallery for most of the Inquiry, and we had lunch together several times. I am grateful to him for a great deal of background knowledge about the Houghton Main Colliery.

3 There was some legal confusion about this point at the time. See pp127-128 below

the Inquiry to be an instrument of vengeance.¹ Each time the Commissioner thanked a member of a rescue team for his part in the rescue operations the atmosphere throughout the chamber clearly indicated that all those present wished to express their thanks. The mining community, it would seem, considered this expression of thanks as an important function of the Inquiry.² Many witnesses saw the Inquiry as a place to claim, and if possible to demonstrate, that they were not to blame for the accident. At least one witness used the Inquiry to confess what he saw as his own shortcomings in providing one of the many links which led up to the accident. Mr. Arthur Scargill stated that "we think that it is necessary to have a public inquiry to establish all the facts",³ a view very much in line with that expressed by the Commissioner in his opening remarks.

I have described the objectives or goals of the Public Inquiry as seen by various individuals. I have not attempted to discover or to analyse the range of constraints felt by these individuals or the additional secondary objectives to which, in their opinion, the Inquiry should have addressed itself. It is self-evident that the objective stated by the Commissioner was not framed in order to reflect a consensus. Rather the Commissioner's objective set the scene for his conduct of the Inquiry.

SUMMARY

(a) By orthodox definition, a Public Inquiry must be an organisation.

1 I did not interview her. She sat behind me in the public gallery and gave very forceful comments, audible to those around her.

2 The manner in which the rescue teams answered questions is compared with the manner in which witnesses from Houghton Main Colliery replied to questions. See p142 below

3 Morning Telegraph 14th June 1975, p1.

It is thus appropriate to study work done upon Organisation Theory in the search for a greater understanding of the Houghton Main Colliery Public Inquiry.

- (b) These studies give ample warnings about the difficulties of achieving objectivity.
- (c) A more objective approach to the study of the Inquiry must be sought than that made solely by focusing attention on the attainment of primary objectives.

The definition of power which I have chosen to use is that given in an Open University course unit, viz. "power is the capacity to use resources to affect other".¹ As the authors of this unit point out, any definition of power is likely to give rise to a number of questions. For example, does power occur only if its effects are either deliberately intended or resisted? Can power be potential or latent, in the sense that others anticipate the use of power and act accordingly? For the purposes of this study however, I will accept

1 D. J. Mickson and A. E. McCullough (1974) p11.

CHAPTER II

ANALYSIS OF THE CONCEPT OF POWER -

THE NATIONAL UNION OF MINeworkERS AND OTHER INTERESTED PARTIES

THE CONCEPT OF POWER

My prediction that the role of H.M. Inspectors of Mines in preventing the accident would not be investigated fully was based on my assumptions concerning the unequal distribution of power within the Inquiry. I have demonstrated that the Inquiry was an organisation and it is thus legitimate to use the term "power" (a concept accepted in the analysis of organisations) as an aid in analysing and understanding the Inquiry. Analysis is hindered by the existing semantic confusion about "power"! Words which are closely related to power (e.g. "authority" and "control") are used by different writers in different ways, and in some cases their definitions are not clear.

The definition of power which I have chosen to use is that given in an Open University course unit, viz. "power is the capacity to use resources to affect others".¹ As the authors of this unit point out, any definition of power is likely to give rise to a number of questions. For example, does power occur only if its effects are either deliberately intended or resisted? Can power be potential or latent, in the sense that others anticipate the use of power and act accordingly? For the purposes of this study however, I will accept

1 D. J. Hickson and A. E. McCullough (1974) p11.

the above definition as the most appropriate.

THE TOPIC FOR ANALYSIS

A feature of the Inquiry was that the National Union of Mineworkers (Mr. Scargill in particular) claimed sole responsibility for requesting a Public Inquiry into the Houghton Main accident.¹ I wish to examine the possible relation between power and the request for a Public Inquiry, and will begin by considering some of the power resources of the National Union of Mineworkers, and of Mr Scargill in particular.

POWER RESOURCES IN RELATION TO:

(i) MR. SCARGILL AND THE NATIONAL UNION OF MINeworkERS

Mr Scargill accompanied Mr. Benn (then Secretary of State for Energy) on a visit to the Houghton Main Colliery two days after the accident. Mr. Benn remarked that "the accident might remind people of the high price of life still to be paid for the coal Britain needed",² That miners are still killed at work is a normative resource (one related to what 'ought to be') which might very well be used by Mr. Scargill and by other union leaders to persuade the public that miners "deserve to be" well paid. The public is perhaps more likely to be persuaded of this as a result of the news coverage expected to be given during a Public Inquiry.

1 Mr Forrest in his final submission to the Inquiry.

2 "The Times", 14th June 1975.

At the time of the accident, Mr. Scargill had been engaged in the "£100 per week face worker" dispute. His attempt to persuade his union that the "£100 per week" resolution be adopted had been defeated, and he had very little to gain from attending the Conference of the Trades Union Congress, which was due to take place at about the same time as the Inquiry was likely to be held. On the other hand, he had gained a great deal of respect from the local mining community for his part in the Public Inquiry into the Lofthouse Colliery accident.¹ Another Public Inquiry would give him an opportunity to demonstrate once again his ability as a quick-thinking debater, representative of the interests of the National Union of Mineworkers. If power is the capacity to use resources to affect others, what are the resources involved here?

One of the most important resources a union leader has in negotiation is his opponent's belief that he, the union leader, has the power to influence other workers. This belief is as important as the reality in influencing the opponent. Belief in the weight and domain² of Mr Scargill's influence was under some threat as a result of the defeat of his resolution, and the more publicity given to this defeat, the larger the threat. If this publicity was to be redirected from "Arthur Scargill, the champion of the £100 per week face worker" to "Arthur Scargill, the champion of miner's safety", then the belief in his power to influence workers was less likely to be damaged.

1 The inrush of water at Lofthouse Colliery Yorkshire 21st March 1973 Cmnd 5419

2 A. Kaplan (1964) defines three variables of power - "weight" (or amount of effect on others), "domain" (the range of persons or groups influenced) and "scope" (the range of responses whose probabilities are affected). Summarised in D.J. Hickson and A.E. McCullough (1974). p12

Mr. Scargill's power to influence workers rests partly with his skill as a debater, a skill which helped establish him as an influential miners' leader. This debating skill is a power resource, a resource which was enhanced in the formal setting of the Public Inquiry, where he was a leading examiner. From the time of the accident Mr. Scargill had pressed for a public inquiry, as did the afore-mentioned National Union of Mineworkers administrator (see p17), who was anxious to ensure that, under the Act, his union would still be able to "get a public inquiry". Their enthusiasm was shared by Mr. Arthur Owens, the Yorkshire Mining Engineer of the National Union of Mineworkers, which employs a professional mining engineer for each of its Areas. Mr. Owens stated¹ that he was anxious to have a public inquiry because he would then be in a position to give his President all the advice he could, not only because that was his job, but also because he wished to exert the utmost influence on all senior National Union of Mineworkers' officials, in order that they would devote even greater attention to safety. In their own domain, all three (Mr. Scargill, the National Union of Mineworkers administrator and Mr. Owens) are expert, and their capacity to use this expertise (a power resource) would be increased during a Public Inquiry.

The framework and conduct of the Public Inquiry provided Mr. Scargill with the power to cross-examine management and senior engineers.² There are those who would question the right of any union leader under any circumstances to query the actions of management and of highly-qualified engineers. As an example, one senior

1 Personal interview at the time of the Inquiry.

2 Statutory Instruments (1975) No.335 8(5)

member of Her Majesty's Inspectorate informed me, in a private conversation, that "it was outrageous that Scargill should have been given the power to play at being some kind of 'workman's lawyer'". In a second category are those who accepted the power which Mr. Scargill had (and has) as a representative of an interested party as being "in the proper order of things" and who believed in the virtue of the Public Inquiry as part of the law of the land. The legal system is able to coerce the former group into accepting the conduct of the Inquiry, even though they (the members of the group) might believe the system to be unjust. The latter group respects the power of any institutional system (in this case the Public Inquiry), because its members believe the system to be part of a more general set of rules which they ought to obey (viz. the law of the land). Most social scientists use the word "legitimacy" (literally "being lawful") to describe an inner and personal belief in the exercise of power. Whether legitimacy is a power resource or a variable quality of other resources is a matter of debate¹. However, my own view is that legitimacy can be classified as a power resource in its own right, but at the same time a resource which alters the quality of other resources.

Those persons coming within the embrace of the second category described above (i.e. those who accept the power invested in the institution with an inner and personal belief) are guided by a legitimacy which I would label as a power resource. Given the necessary official setting, an increase in legitimacy naturally

1 "In Etzioni's scheme, coercive, remunerative, or normative power may each be used legitimately or non-legitimately or in some degree legitimately. French and Raven (1959) list legitimacy as a resource". So say Hickson and McCullough, op. cit., p20.

accrues from the competent questioning of a senior manager by an effective union leader. In other words, the power resource of legitimacy becomes stronger. This should be obvious to any impartial observer.

The union leader's right to cross-examine management under the special conditions of a Public Inquiry may or may not lead to the feeling that he possesses a more general right to question management. There would, no doubt, have to be some other power resource in order to justify the more general questioning of management, but the quality of this power is enhanced if it is regarded as legitimate. This legitimacy might even spread to actions quite unrelated to the questioning of management. The use of another power resource (in, for example, the taking of disciplinary action within his union) might be more acceptable to some members of that union because of the enhanced legitimacy obtained by the union leader having been associated, as a leading examiner, with official "judicial-like" proceedings.

(ii) THE NATIONAL COAL BOARD

The National Coal Board, during its submission to the Public Inquiry, stated its anxiety to refute any impression created by Mr. Scargill that the National Coal Board "or anyone else" was opposed to the holding of an inquiry, although they were opposed to a Public Inquiry.

"The choice," they said, "was not between a Public Inquiry or no inquiry at all. It was between whether the inquiry should be in public or one held under the auspices of Her Majesty's Inspector of Mines and Quarries. ... Whether an Inquiry should be public or one for Her Majesty's Inspectorate is a matter for argument".¹

¹ W. Forrest, on behalf of the N.C.B., in its submission on the final day of the Inquiry, Thursday 4th September 1975.

The National Coal Board put forward two points of view supporting its reservations about a Public Inquiry.

"The first was that technical matters could be more effectively and expeditiously dealt with in another way; and the second was that many witnesses found it an ordeal, and perhaps under conditions of stress their evidence may not have come through in the manner in which they would have wished".

The National Coal Board certainly did not request a Public Inquiry. An inquiry had, in fact, already taken place under Her Majesty's Inspector of Mines and Quarries at a time when it was still not clear whether there would be a Public Inquiry. The claim that technical matters could be "more effectively and expeditiously dealt with in another way" is itself debatable; it would depend upon how the word "effective" is defined, and upon what "other ways" the National Coal Board had in mind. For instance, the accident at Markham Colliery¹ had been preceded by a similar technical failure elsewhere², and this failure had been dealt with other than by a Public Inquiry. If this previous failure had been the subject of a Public Inquiry it is less likely that the Markham Colliery accident would have occurred. Effective initiatives dealing with technical matters do arise directly from Public Inquiries. After the Houghton Main Colliery Public Inquiry itself a working party was formed to review "...the design and operation of auxiliary fans as well as other factors relevant to the ventilation of narrow drivages".³

Note that the National Coal Board was not against an inquiry

1 At Markham Colliery a cage crashed into the pit bottom due to an overwind. 18 people were killed and 11 were seriously injured. Cmnd 5557

2 Ollerton Colliery (1961)

3 J. Carver (1976) p21

"...held under the auspices of Her Majesty's Inspector of Mines", although it viewed with disfavour the holding of a Public Inquiry. Why was this so? I would suggest the following reason. Within the industry the Mines Inspectorate is regarded a "part of our mining industry" while the Health and Safety Commission (which authorises the holding of a Public Inquiry) is regarded as "the government". Though the Chief Inspector of Mines (i.e. "part of our mining industry") was appointed Commissioner of the Inquiry, the Inquiry bore the stigma of having been authorised by the Health and Safety Commission and by the Secretary of State. This antagonised certain professional mining engineers,¹ who felt that both the authorisation and the Inquiry itself were examples of unwanted "government interference." This attitude I found to be general among the deputies, overmen, colliery managers, and members of the Inspectorate whom I interviewed.

That the Mines Inspectorate is generally regarded as an integral part of the industry is exemplified by the continuing debate about a unified inspectorate. Ever since the publication of the Robens Report there has been opposition to the idea of an inspectorate unified under the auspices of the Health and Safety Commission. The Deputy Inspector of Mines, for example, was very doubtful that the Mines Inspectorate could learn much from other Inspectorates.² His doubts are summed up in the following statement by Lord Taylor of Mansfield:

1 Private conversations, at the time of the Inquiry, and at subsequent Meetings of the Institution of Mining Engineers.

2 Personal interview at the time of the Houghton Main Inquiry.

"...The view of the mining industry as a whole (is that)...until some of the other industries are brought up to the level of the mining industry in this field of safety, it would be better at this moment to leave well alone".¹

Fears were also expressed in the House of Commons that the Mines Inspectorate could be "watered down" in its quality if it was joined with other Inspectorates.²

Were any power resources involved in the National Coal Board's anxiety to dispel the impression that they were resisting an inquiry? However convincing their arguments, if the National Coal Board were seen not to favour a Public Inquiry it would very probably create the impression that the Board had something to hide from the public. The only resource by which the Board could try to persuade the public that it had nothing to hide would have been by convincing them (the public) that an inquiry under the Mines and Quarries Inspector would be as effective as a Public Inquiry.

The evidence available prior to the Inquiry leads one to suspect that the chance of prosecutions being initiated under the Mines and Quarries Act might have been greater after a Public Inquiry than otherwise. There had been no previous Public Inquiry into a colliery accident under the Health and Safety at Work Act of 1974, and the chances of prosecution were unknown. On the other hand, Her Majesty's Inspector of Mines rarely prosecuted, since

1 Hansard (H.L.) 27 June 1974 cols 1684/5 (Reference in Sir Andrew Bryan (1975) p134.

2 Alexander Wilson, M.P. Hansard (H.C.) 3 April 1974 cols 1331/2 (Reference in Sir Andrew Bryan (1975) p132.

"...the more usual role of H. M. Inspector is that of counsellor and friend, ready to place his specialised knowledge, gained through inspections at many different collieries and by contact with a variety of mining conditions at the disposal of owners, management and men alike".¹

(iii) STATUTORY CERTIFICATE HOLDERS OF THE NATIONAL COAL BOARD

Statutory certificates are required by all officials who wish to hold certain appointments in the mining industry. The responsibilities of members of the National Association of Colliery Overmen, Deputies and Shotfirers, the British Association of Colliery Management and the National Association of Colliery Managers Limited are specific. However, each member faces the real threat of a loss of power resources if he is prosecuted for an offence under the Mines and Quarries Act, since conviction can involve certificates being cancelled or suspended, in addition to or instead of other penalties, i.e. loss of money or loss of freedom.

(iv) THE CHIEF INSPECTOR OF MINES.

The Commissioner of the Inquiry, the Chief Inspector of Mines, when I asked him what advantages there were in holding a Public Inquiry, indicated that, following Public Inquiries, extra resources were likely to be made available to help reduce accidents.²

1 Sir Andrew Bryan (1975) p95

2 His exact words were "We get more mileage from a Public Inquiry."

CONCLUSIONS

(a) A particular course of action (i.e. the holding of a Public Inquiry) is supported by those who would gain in power by that action and opposed by those who would lose.

(b) Use of the concept of power is less constraining than an attempt to surmise possible secondary objectives. Secondary objectives which did or do not meet with my personal value system might have been rejected. The consideration of individual motivation has not been considered relevant to this analysis.

(c) Legitimacy has been described as a power resource and, at the same time, as a resource which alters the quality of other resources. This description may be of value in resolving the debate as to the relationship between power and legitimacy.

(d) The decision to hold (or not hold) a public inquiry is part of a central problem of the thesis, i.e. the problem of considering what constitutes "too much" and "too little" state regulation.

CHAPTER IIICRITERIA FOR HOLDING A PUBLIC INQUIRY

The Health and Safety Commission, with the consent of the Secretary of State, has sole responsibility for authorising a public inquiry into mining accidents. By what criteria should a public inquiry be authorised?

For much of the nineteenth century middle class attitudes and opinion, expressed through the medium of the press, had the greatest influence on whether a public inquiry took place. Nelson Boyd, writing in 1879, pointed out that only the greatest disasters of the early 19th century found their way to public notice:

"Men were crushed or suffocated, or otherwise killed in pits, and buried without inquiry or record as it was not customary to hold inquests on the victims of colliery accidents. But the accidents entailing large loss of life forced themselves on publicity".¹

Today the inquiry into any mining accident is extensive, but the publicity given to an accident involving perhaps five deaths is many times greater than that given to five accidents each involving one death. Accidents involving the use of Mines Rescue Personnel also attract publicity. As a specific example of the lack of publicity afforded to certain mining accidents, one has only to consider the static power-loader-chain. This device caused 150 accidents in the years 1967 to 1973, yet, outside of the industry, who has ever heard of the dangers of the static power-loader-chain? On the other hand,

1 R. Nelson Boyd (1879) p25

a great deal of public concern was created by the inrush of water at Lofthouse Colliery on 21st March 1973, as a result of which seven men were killed.¹

It is reasonable to assume that a Public Inquiry is more likely to follow an accident which attracts public notice. If a Public Inquiry leads to more resources being concentrated in both the investigation of the accident and in the solution of problems identified by that investigation, does this result in the "best" allocation of limited resources? For example, great advances have recently been made in the development of alternative haulage systems for power loaders, a development particularly encouraged by H.M. Inspectors of Mines. Would the development have been any faster, and would there have been a resulting reduction in accidents, had there been a Public Inquiry into accidents connected with static power-loader-chains? The Chief Inspector of Mines and Quarries assertion that "we get more mileage out of a public inquiry" supports the view that more resources are available at and after public inquiries.

A useful subject for further study would be a comparison of the various types of inquiry and the identification of factors which might make one type of inquiry more "successful" than another. Public concern might provide the biggest impetus for the initiation of a public inquiry, which in itself might generate more public concern and resultant action. There is the possibility that the finding of a public inquiry into an accident or accidents with which the public

1 Cmnd 5419

is virtually unconcerned might be totally ignored by that public. On the other hand, the Health and Safety Commission now has the authority to allocate resources itself, on the basis of conclusions arising from any type of investigation.

When faced with conflicting demands in support of and opposed to a public inquiry, an expedient solution would be for the Health and Safety Commission and Secretary of State to consider the relative power of the various factions and to propose a compromise. Alternatively, reliance could be placed on the application of a set of principles which could be used to explain to the disappointed factions why it was necessary to reject that view. A third possibility, less painful to the decision makers, would be to leave the conflict unresolved and to announce a decision without justification.

The criteria used to direct a Public Inquiry were not published. However, by taking "positive and lively initiatives",¹ encouraging research into various types of inquiries, and by assessing, evaluating and publishing the results, an effective Health and Safety Commission should be able to issue guidelines as to the suitability of a certain type of inquiry for a given set of circumstances.

RECOMMENDATION

In order that the Health and Safety Commission might more rationally and effectively use limited resources, the costs and benefits of various types of inquiry into accidents need to be studied and the results published.

1 A phrase used by Baroness Birk in describing the duties of the Health and Safety Commission. Hansard (H.L.) 27 June 1974 Col 1702.

CHAPTER IV

BUREAUCRACY AND STATE INTERVENTION: AN
HISTORICAL PERSPECTIVE¹THE PHYSIOCRATS

The Physiocrats of mid-eighteenth century France introduced a doctrine opposed to mercantilism, an economic theory (then in decline) which held that money was the only form of wealth. Mercantilist economists believed that government intervention was a major means of increasing national prosperity, and they therefore encouraged the proliferation of government regulations, a proliferation which disaffected many sections of French society. These sections obviously believed that their lives were subject to too much state regulation.

The "Tableau Économique" of François Quesnay (1694-1774), physician to Louis XV,² demonstrates, by means of an "input-output" model not dissimilar in principle to that of the 1973 Nobel Prize winner, Wassily Leontief, the ways in which income flows through the economic system. Quesnay described the French economy in terms of three social classes - landlords, peasants and artisans. Each class was dependent for its livelihood on an accepted seasonal cycle. Every spring the peasant would be in possession of part of the previous year's harvest, a stock which would provide him with food and with such things as "inputs" of seed. Each year he would produce a crop

1 "A study of the history of opinion is a necessary preliminary to the emancipation of the mind. I do not know which makes a man more conservative - to know nothing but the present, or nothing but the past". John Maynard Keynes. Quoted by Harold Silver The Times Higher Education Supplement 1st July 1977: 17

2 J.K. Galbraith (1977) pp18-22

which not only replaced the stock consumed as food and seed but also provided a surplus or net output. From this he would pay rent to the landowner, whose seigneurial rights entitled him to the surplus. Commerce and manufacture were regarded as non-productive.

With the benefit of hindsight it is easy to criticise certain of the Physiocrats' ideas, though this is not to demean their intellect. It was true that the peasant paid his rent by means of money obtained by the sale of his crop surplus, a crop produced on his own holding. That the productivity of the land was merely the peasant's surplus of production over consumption is, however, untenable and an interpretation favourable only to the landlord. It could be argued that an agricultural surplus is less dependent upon the fertility of the soil or upon nature's bounty than upon the industry of the peasant, and that it is he, not the landlord, who should receive the benefit of any surplus.

J.K. Galbraith, in his recent television series "The Age of Uncertainty", made the interesting comment that in his youth the influence of the Physiocrat was not dead. The idea that all wealth originated in agriculture was a firmly-held belief of the American Farm Bureau Federation. It required a good deal of persuasion to convince the influential but essentially conservative American farming community that agriculture was not the only basic industry. In the same way, it could be argued that it takes a great deal of persuasion to convince the mining industry that it has anything to learn from the experience of other industries. The mining industry is, in the writer's view, over-confident that it has little to learn from other industries in the question of safety, an over-confidence re-inforced by the fact that the Mines Inspectorate undoubtedly consists, in the

main, of competent, conscientious and highly professional men, whose training and experience in the mining industry and whose professional associations have convinced them of the essential rationality and rectitude of their thinking.

Jean de Gournay (1712-1759), another of the leading Physiocrats, is credited with the coining of the word "bureaucracy".¹ To de Gournay "bureaucracy" was a derogatory term, in that clerks, secretaries and inspectors were not appointed for the benefit of the "public interest", but indeed that the "public interest" appeared to have been created so that offices might exist. This argument is not levelled against the Mines Inspectorate, and there is certainly no feeling within the industry that the Inspectorate fails to represent the interests of the mining industry. However, the structure of the Inquiry shielded the Inspectorate from possible criticism of the policy and operations of the local Inspectorate prior to the disaster. This is not to infer that the policy and operations of the Inspectorate were unsatisfactory, but merely to emphasise that the Inspectorate might have learned how to operate more effectively had the Inquiry been structured in such a manner as to allow their own management to be examined. I concede that the laying bare of the policy and actual effectiveness of the local Inspectorate in preventing the disaster might have damaged the interests of the industry as a whole, but the same argument (that respect and authority might be undermined) could just as easily have been put forward by representatives of underground officials.

1 M.A. Albrow (1970)

The word "bureaucracy" did not become a universally accepted term until long after de Gournay's death. Wilhelm von Humboldt (1767-1835), an architect of the Prussian educational system and the founder of the University of Berlin, did not use the word bureaucracy in his influential essay "On the Limits of State Action", written in 1792.¹ Nevertheless, the central theme of that essay, i.e. that the state was becoming more inflexible and that decisions were being taken "mechanically", by men conditioned to behave in a stereotyped and unthinking manner, is a complaint commonly made of present-day bureaucracy.

One of Humboldt's major concerns was with the:

"absolute and essential importance of human development in its richest diversity...Whatever does not spring from a man's free choice, or is only the result of instruction or guidance, does not enter into his very being, but still remains alien to his true nature; he does not perform it with truly human energies, but merely with mechanical exactness".

Such a criticism, i.e. of unfeeling "mechanical exactness", could be levelled at the Commissioner of the Houghton Main Colliery Inquiry. Despite the obvious sincerity of his sympathy, he addressed those who had been bereaved or injured with the exact words used by a previous Commissioner at the Seafield Public Inquiry (see p134). Well do I recall the stillness in the room when Mr. Carver's speech of sympathy was made, and the effect it had upon those in the public gallery. However, it is unfortunate that the constraints of a formal public inquiry should have prevented him from using his own words.

1 W. von Humboldt (1969) p28
His brother, Alexander (1769-1859), who as a young man was the Chief Inspector of Mines of Prussia, published the posthumous German edition of Wilhelm's work, while the complete text was available for the first time only in 1852. Sections of it had, however, appeared previously in the journal Neue Thalia and in Berlinische Monatsschrift.

ADAM SMITH

Galbraith names Adam Smith (1723-1790) as the founding father of economics and described Smith's visits to various Physiocrats.¹ In particular, he described how Turgot (1727-1781), Controller-General of Finances under Louis XVI, agreed that public expenditure and the burden of taxation on enterprise should be kept to a minimum, and that this should be effected by the limitation of the power and functions of the state. After some years of thought, the lessons of Smith's travels were distilled and set down in "An Inquiry into the Nature and Causes of the Wealth of Nations",² the central theme of which is that a nation's wealth depends upon the diligent pursuit by each citizen of his own interests, and that the individual reaps the rewards or suffers the resulting penalties. In serving his own interests, the individual serves the public interest and is guided to do so as though by an unseen hand. Better the unseen hand than the visible, inept and predaceous hand of the state, wrote Smith.

Another central theme of Smith's book was that the wealth of a nation was enhanced by the division of labour. In contrast to the Physiocrats, he held that labour rather than land was the chief source of wealth. He attributed the greatest importance to the superior efficiency of specialisation, which required larger markets, which in turn entailed longer production runs. This naturally led Smith to campaign against tariffs and other restrictions on trade, and

1 J.K. Galbraith (1977) p22

2 A. Smith (1950) First published 1776

for the greatest possible freedom, national and international, in the exchange of goods. Writing at a time when manufacturing industry was growing in importance, Smith agreed with the Physiocrats that a mercantilist government which imposed tariffs, granted monopolies and burdened its citizens with taxes was an enemy of freedom.

Given his scarcely-disguised criticism of the business community (he disagreed with the whole idea of limited companies, an idea which provides a basis for much of western capitalism), it is surprising with what enthusiasm businessmen still extoll Smith's virtues. The "Wealth of Nations" has been quoted and interpreted, often wrongly, by interested parties and by lobbyists opposed to state intervention ever since it was first published two hundred years ago. Smith's analysis of the contemporary business world, especially his praise of the system of "laissez faire",¹ has consistently been used by the anti-interventionists as justification for their opposition to government interference. Smith's "better the unseen hand" quote has become a much-abused slogan used apropos to government "meddling". That the "unseen hand" invariably provides a surer guide than does the "visible hand" of government intervention is, of course, untenable, as is the assumption that the hand of the state must always be "inept and predaceous".

A slogan derived from rational thought can thus be very effective in influencing social beliefs, even in a context entirely different from that in which the slogan was born.

1 The Physiocrat's maxim was "laissez-faire, laissez-passer". The term 'laissez-faire' was relatively infrequently used in literature or debate before the middle of the nineteenth century. For a full discussion on the definition of 'laissez-faire' see A.J. Taylor (1974)

RICARDO AND MALTHUS

In the twenty-five years after Adam Smith's death David Ricardo (1772-1823) and Thomas Malthus (1766-1834) worked out the theories of the English Classical Economists. Ricardo devised the method of economic analysis which is known as "building a model".¹ In solving practical problems he extracted the bare essentials, leaving aside all irrelevant details, and examined the interaction of parts. Although the relations which can be deduced by a manipulation of the "model" are often illuminating, the danger is that a detail considered irrelevant might actually be important.

Though Ricardo's model was new to economic analysis, models had been used, for example in astronomy, for centuries. The Ptolomaic model, which explained the motion of the sun and the planets, had proved successful in predicting solar and planetary events. Since it took astronomers so many years to learn this complicated model, not unnaturally it was difficult for them to consider that its basis, i.e. the assumption that the sun rotated around the earth, could be incorrect. In the same way, it could be argued that the career structure of the Mines Inspectorate is such that inspectors have to spend many years learning a complicated technology, and that, as a result, they become entrenched in the traditions of their industry. This makes it exceedingly difficult for inspectors to consider strategies other than those with which they are familiar. The

1 So most standard texts on Economics claim, see, e.g., J. Robinson and J. Eatwell (1973). Perhaps Quesnay should be credited with this distinction, but on the other hand his model was not adopted, developed and manipulated by his contemporaries.

Ptolomaic model stifled debate and retarded progress in astronomy for centuries, in that once the model had been proved successful in predicting events (minor adjustments had made it even more successful), it was very difficult to argue against its basic assumptions. In the same way, an inspectorate which has proved successful in helping to reduce accidents can be well protected against criticisms of its basic policies and operations.

Ricardo was prepared to submit his ideas to criticism and to alter his thinking in the light of such criticism. One of his main critics (and friends) was Malthus, who is perhaps best known for his pessimistic "Essay on the Principle of Population" (1798). Malthus argued that the human race tends to breed up to the limit set by the supply of food; only "moral restraint" could save the world from being over-populated. According to Malthus's thesis, wages had always to be at only a subsistence level. Altruistic attempts to permanently raise wages above this level he adjudged to be ill-conceived interference. Thus, on the subject of pauperism, Malthus wrote that "...however ardently they may desire to relieve them (paupers), and whatever attempts they (government) make to do so, they are really and truly unable to execute what they benevolently wish, but unjustly promise".¹ This argument was influential in deciding the degree of state intervention throughout much of the nineteenth century.

1 T.R. Malthus (2nd edn. 1803) p507. Quoted and referenced in A. Bullock and M. Shock (1967)

Ricardo, unlike Smith, did not view the economic world as a mechanism working for the good of each and every constituent member. From his theories of wages and rent he concluded that the ordinary processes of economic development would only benefit the landowner, that wages would always be held at the level of subsistence and that the state had no part to play in remedying what he felt were the "natural" deficiencies of the economic order. Ricardo believed that government intervention would eventually make things worse for the poor, and he urged against contending with the inevitable, suggesting acceptance of the least bad.¹ Such an argument could have provided the rich with a screen behind which to stifle the cries and suffering of the poor. Through such writings economists were brought to the forefront of the debate on the role of the state, both in particular situations and in terms of general policy. Though they had a certain influence, we can be grateful that they did not have more, since experts with 'authoritative specialisation can make difficult the formulation of new approaches and can retard progress.

It is not with economic theories that we are presently concerned, but rather with attitudes of economic theorists towards state intervention. Ricardo and Malthus believed state intervention, in the long run, to be misguided and detrimental to society in general. In economic terms it was difficult for contemporaries to challenge these beliefs, but on humanitarian grounds their theories were less

1 See J.K. Galbraith (1977) p36

easy to sustain.¹ Though Ricardo and Malthus were well-versed in countering such arguments,² I suggest that their assumptions, the basis of their theories, were occasionally wrong. Like the Physiocrats, their ideas were unduly influenced by the pressures of the current economic and social systems. Here we have an example of two eminent thinkers whose philosophy was blinkered by contemporary circumstances. Similarly, ideas are constrained, and progress is retarded, by the very circumstances of the present-day coal mining industry, which, as ever, is parochial yet lacking in introspection, i.e. it (the coal mining industry) knows only its own social system yet fails to examine that system critically.

UTILITARIANS

In the early nineteenth century, as a consequence of the changed circumstances brought about by the Industrial Revolution, the state began to turn its legislative attention away from commerce and towards industry. Whereas the followers of Adam Smith had criticised the organisation of England's economy and had seen that it was necessary to replace mercantilism with free trade, Jeremy Bentham (1748-1832) was critical of the very nature of British Institutions, for example, government, both central and local, and the law, which he

1 E.g. "We do not think it right that we should know nothing but work and suffering from Monday morning to Saturday night, to make others rich". Petition presented by a march of factory children at Manchester 4th May 1833, cit. in S.E. Finer (1952) p55

2 E.g. an argument such as presented in the autobiography of J.S. Mill, viz, "...my father's teachings tended to the undervaluing of feeling. ...Offended by the frequency with which, in ethical and philosophical controversy, feeling is made the ultimate reason and justification of conduct, instead of being itself called on for a justification, while, in practice, actions, the effect of which on human happiness is mischievous, are defended as being required by feeling..." J.S. Mill (1924) p93 (First published in 1873)

believed had been built upon false principles. The principle upon which Bentham wished to build a new administrative machinery and legislation was that of "the greatest happiness of the greatest number", a phrase first used by Francis Hutcheson (1694-1747). Bentham was the intellectual leader of English Utilitarianism, a concept which held that men are moved chiefly by the desires to obtain happiness and to avoid pain. As the happiness of the individual involves relationships with other persons, it was necessary, Bentham felt, for legislative limitations to be imposed upon the freedom of all.

That the Utilitarians had as clear and desirable an objective as "the greatest happiness of the greatest number" almost inevitably meant that theirs became a rallying point for a disparate host of social thinkers. Many Utilitarians applied themselves to the problem of how best the government could help achieve this objective. From the mass of argument and counter-argument one pamphlet emerged as perhaps the most important and influential, that of John Stuart Mill (1806-1873) on "Utilitarianism", first published in 'Fraser's' in 1861.¹ One of Mill's main points was that some kinds of pleasure are more valuable to the individual than are others, for example that a pleasure of existence which necessitates use of a "higher" faculty (e.g. intellect) is necessarily more pleasurable and "valuable" than is the pleasure derived from basic physical satisfaction. However important and influential his analysis, it is nevertheless open to debate and is of little use in practical decision-making, specifically

1 Chapter II of Utilitarianism is in J. S. Mill (1976) pp116-140

John Stuart Mill claimed to have been the first person who brought the word utilitarian into use, 'adopting it from a passing expression in Mr. Galt's Annals of the Parish'.
op cit p117

in helping to judge whether a government should or should not intervene in a particular case.

For the individual it is sometimes difficult to decide which pleasure is to him the more satisfying. The choice between two courses of action, even if the individual is perfectly informed, often presents a dilemma.¹ The difficulty in measuring degrees of happiness makes the whole concept of the greatest happiness of the greatest number an inappropriate criterion on which to base truly rational decisions, whether they be individual or government decisions. If the government uses the concept of the greatest happiness as a rational guide to whether or not there should be a public inquiry, the whole area of decision-making is beset by difficulties. Among these difficulties is the fact that one cannot put "happiness" on a cardinal scale, and that even if one could list all the possible outcomes of having or not having an inquiry the task of assigning realistic probabilities to these outcomes is almost impossible. The central controversies in current decision-making theory revolve around the difficulty of measuring these two key variables, i.e. "happiness" (or its present day equivalent, "utility") and "probability". The difficulty of considering risks

1 "Between two dishes, equally attractive
 And near to him, a free man, I suppose,
 Would starve to death before his teeth go active;
 So would a lamb 'twixt two fierce wolfish foes,
 Fearing the fangs both ways, not stir a foot;
 So would a deerhound halt half between two does;
 No I can't blame myself for standing mute,
 Nor praise myself: for I must needs so do,
 Suspended 'twixt two doubts, alike acute".

Dante Alighieri (1966) p81

Imaginary dilemmas such as these were a favourite subject in logical exercise in the Middle Ages, e.g. The dilemma of Buridan's ass. See commentary p85 *ibid*.

is even more compounded by the fact that there is evidence¹ that in a face-to-face group discussion the individual will make decisions of a higher implicit risk element than if he/she is alone.

If all the difficulties in the measurement of "happiness" were solved, and if individual groups within society were able to determine courses of action which resulted in their own greatest "happiness", the outcome would not necessarily entail the maximum "happiness" of society as a whole. For instance, the coal mining industry might excuse unequal representation of individuals at the Inquiry on the grounds that this facilitated the "greatest happiness" of the industry. On the other hand, the injustice of unequal representation, which might have been regarded as trivial, could well be measured by those outside the mining industry in such massive units of unhappiness as to cause the total "happiness" of society to be suboptimal.

Although it is impossible to measure "happiness", it is possible to eliminate the more obvious causes of "unhappiness" by definition and maintenance of "basic human rights". The power of organisations is a major threat to liberty in modern society, and it is important, if this threat is to be removed, that organisations should be prevented from taking actions which impinge upon "basic human rights". Even more of a threat to liberty is the tacit dismissal of individual rights, especially in a quasi-judicial setting like the Houghton Main

1 M.K. Deets and G.C. Hoyt (1970)

Colliery Inquiry, by the coming together of several organisations within the same industry.¹

TWO INDIVIDUALS, TWO REPORTS AND TWO PHILOSOPHIES
A) CHADWICK, B) TREMELLIERE

A) EDWIN CHADWICK (1800-1890)

Modern and New Utilitarian disciplines have been seen by some historians as a major force directing and shaping the form and content of Victorian and Victorian government activity. Others have seen an equally potent but an ideological explanation for this activity.² Certainly the form taken by government intervention in the second quarter of the nineteenth century (such things as administrative commissions, central control and local inspectors) were often utilitarian and were features of Bentham's Constitutional Code, for the editing of which Edwin Chadwick (1800-1890) was employed. On the other hand, there is evidence that the demand for greater government intervention came from many sources,³ (for example the pamphlet of 1842 and of 1847, instanced below) and that this demand was supported by individuals with a strong sense of utilitarianism. Such an individual was the Reverend John Hodgkin who gave the "Funeral Sermon of the Pelling Colliery Disaster" in 1813 and who contrasts markedly with some of the dry, unfeeling Benthamite theorists.

1 E.g. the unwillingness of the Inquiry to allow Mr. Martin to refute accusations made against his good name (p145 below) E.g. the interests of the individual (Mr. Wright) were sacrificed by his supposed representative (Mr. Fellows) in favour of the organisation to which both belonged (The National Association of Colliery Overmen, Deputies and Shotfirers) (pp146-7 below)

2 See p122 below

3 See p 123 below

4 See p 123 below

5 For an account of the Pelling Colliery Disaster see H. and S. Duchan (1973) pp47-51 et passim and also Sir Andrew

Bryan (1975) pp18-19.

CHAPTER V

TWO INDIVIDUALS, TWO REPORTS AND TWO PHILOSOPHIES
a) CHADWICK, b) TREMENHEERE

(a) EDWIN CHADWICK (1800-1890)

Bentham and his Utilitarian disciples have been seen by some historians as a major force directing and shaping the form and content of Williamite and Victorian government activity. Others have seen an organic rather than an ideological explanation for this activity.¹ Certainly the form taken by government intervention in the second quarter of the nineteenth century (such things as administrative commissioners, central control and local inspectors) were often Benthamite and were features of Bentham's Constitutional Code, for the editing of which Edwin Chadwick (1800-1890) was employed. On the other hand, there is evidence that the demand for greater government intervention came from many sources,² (for example the petitions of 1842 and of 1847, instanced below 3, 4) and that this demand was supported by individuals with a strong sense of humanitarianism. Such an individual was the Reverend John Hodgson who gave the "Funeral Sermon of the Felling Colliery Sufferers"⁵ in 1813 and who contrasts markedly with some of the dry, unfeeling Benthamite theorists.

1 See A.J. Taylor (1972) p33

2 "...As early as 1662, it is said that 2000 colliers of Northumberland and Durham prepared a petition to the King asking, among other things, that the mine owners should be required to provide better ventilation of the pits. Already in 1676, the Government, in the person of the Lord Keeper North, was suggesting that a second shaft ought always to be provided". S. and B. Webb (1965) p355

3 See p122 below

4 See p 123 below

5 For an account of the Felling Colliery Disaster see H. and B. Duckham (1973) pp47-53 et passim, and also Sir Andrew Bryan (1975) ppl8-19.

Often the men chosen to carry out government policy were by no means Benthamite. For example, Hugh Seymour Tremenheere (1804-1893), an active Inspector and Royal Commissioner who is credited by the Dictionary of National Biography with 14 Acts of Parliament, ranging from underground inspection to bakehouse regulation, was a Whig.¹ The most irrepressible and ubiquitous bureaucrat of this period, however, was Chadwick, Bentham's protégé, who served on commissions even more numerous and varied than did Tremenheere.^{2, 3}

"The Royal Commission on the State of the Children in Factories" of 1833⁴ is of particular interest because it was one of the earliest Commissions of Inquiry. The subsequent Report contains some enlightened comments from Chadwick about accident prevention and compensation, though the effective factory inspectorate set up as a result of the Report was not established for the purposes of accident prevention.

This Inquiry is of relevance to the thesis in that it demonstrates the extent to which an inquiry can be affected by the Commissioner's beliefs concerning state intervention. These beliefs formed an integral part both of the way in which the Inquiry was conducted, and of the way in which the conclusions were reached.

The revelations of the Select Committee on Child Labour (The

1 Between 1855 and 1870 he was also Commissioner of Inquiry into various forms of female and child labour. See R.K. Webb, "A Whig Inspector", *Journal of Modern History*, Vol 27, pp352-364.

2 See S.E. Finer (1952), *passim*

3 See M. Marston (1925), *passim*

4 Lanchester Polytechnic Library has the complete set of British Parliamentary Papers reprinted by the Irish University Press. Reports from Commissioners. Factories. Session, 29 January-29 August (1833) Included are the minutes of evidence and reports by district commissioners.

Saddler Report)¹, published in August 1832, produced such an outcry that it was considered imperative that swift measures be taken to control the employment of children. These measures took the form of the Ten Hours Bill, introduced by Ashley, and debated by Parliament in early 1833. Even in the changed climate of opinion - the Bill had been introduced and defeated two years earlier - the combination of political and business interests proved too great and the Bill went down to defeat by a single vote. However, as a sop to the Bill's supporters, and in order to quieten the growing anger of the working population, the decision was taken to instigate a further inquiry - this time a Royal Commission - which it was hoped would report within six weeks, in order that legislation might be pushed through during that same Parliamentary session.

Three Benthamite followers, Edwin Chadwick, Thomas Tooke and Southwood Smith, were appointed as the three Central Commissioners, with Chadwick as the Chief. They reached their conclusions by an over-powering 'blend of logic' and 'massive inductions', after collecting vast amounts of data. To facilitate the collection of this data, Assistant Commissioners were appointed, their duties being to travel and to prepare the field reports. These Assistant Commissioners, however, were seconded to their responsible positions on the Commission often by virtue of their connections rather than their talents or humanitarian sympathies. This necessarily embarrassed

1 Reports from Committees, Labour of Children in Factories, Vol XV, Sessions (1831-1832), reprinted by the Irish University Press.

the Central Commissioners¹ and made collaboration difficult, in that these Assistant Commissioners had little knowledge and no zeal for the Utilitarian philosophy.

The Commissioners firstly compiled a cleverly-worded questionnaire, several pages in length, from which they expected to elicit the attitudes and prejudices of witnesses. Though "The Times"² voiced its objection to some of the questions, in that they seemed to be of too personal a nature, the Commissioners felt the need to gather evidence on every aspect of living and working conditions, since they saw that the terms of reference required that a broad survey be taken.

Lest there might have been possible intimidation of witnesses, provision was made to take testimony in private. However, this only further infuriated the mill-workers of the north, who equated secrecy with pro-owner bias and made detailed contingency plans designed to frustrate the Commissioner's work and to disrupt the taking of evidence.³

1 Chadwick describes in a letter to Bishop Blomfield how one particular Assistant Commissioner was appointed. "...There was one medical man (Loudon) whose fitness I particularly doubted. He himself avowed his utter want of preparation for such a task. 'Then how came you to enter upon it?' was my question. 'Why I know Lord Althorp, from having attended some of his family at Leamington. I was passing down the street the other day, when who should accost me but Lord Althorp, with 'Hello, Loudon, would you like to be on a Commission?' Thinking it might lead to something good, I said 'Yes', and his Lordship put me on!" Cit. in Finer, op.cit., pp52-53

2 The Times, 3 June 1833.

3 This account is included as a further example of "unanticipated consequences of purposive action." (See p108 below)

Simultaneously, the demand for the Ten Hours Bill was pressed forward by means of marches, demonstrations and petitions, perhaps the most important of which was the march of the Manchester factory children.¹

The distrust, even anger, with which news of an impending visit by the Commissioners was greeted by the Leeds operatives is typical of the general attitude of the northern workers. The Leeds workers stated themselves to be "at a loss for words to express our disgust and indignation at being threatened with a visit from an inquisitorial itinerant to enquire whether our children should be worked more than ten hours a day", adding that they were "at once and for all determined that they shall not".²

Chadwick opposed the idea of regulating the adult working day, on the sincerely-held ground that such regulation would disturb the delicate equilibrium of the master-servant relationship, which was central to the principles of common law and upon which, contemporary society believed, depended the continuing profitability of business and the maintenance of living standards. This argument doubtlessly assumed that the adult working population was able to exert sufficient economic and social pressure upon employers in the negotiating of the labour contract. Where a section of the working community was quite obviously unprotected, as were the children employed in factories, this self-help idea was clearly untenable. In such a

¹ above, p43, footnote 1

² S.E. Finer (1952) p53 et.seq.

case, Chadwick believed, government intervention was essential to the interests of the unprotected party, but, at the same time, Chadwick tempered humanity with prudence. If an evil could not be excised without damage to the economic fabric, then Chadwick believed it could not properly be called "evil." Such were the Central Commissioners' priorities throughout the course of the Commission, it being always their intention that the hours worked by children in the factories be greatly reduced. However, Chadwick's final proposal was not nearly as radical, being in fact the very suggestion of the cotton magnates. His proposal was that some reduction in hours be afforded the youngest children, those between nine and thirteen, but that above the higher age the length of the working day be left unregulated. (In Chadwick's view, children over the age of 13 were adults.) By allocating the youngest children to two eight-hour shifts, factory owners could, should they so desire, still keep their machines running and manned by adult labour for up to sixteen hours a day. This had always been Chadwick's purpose, for he thought social progress would best be facilitated by the formation of large scale enterprises, which the above scheme encouraged, in that it suited only the larger, highly-capitalised steam-driven factories of the town. He remained passionately anti-trade union and pro-free competition (as incidentally did Tremenheere).

Chadwick's Report satisfied neither employer nor employee and it was criticised in almost every quarter. Superficially it seemed a model of inconsistency. Closer examination nevertheless shows that Chadwick remained true to his oft-quoted beliefs, i.e. that children under thirteen should be afforded all possible protection by law, but that those over thirteen should be compelled to make their

own way in the world. The Report was an attempt to rationalise this thinking, by recommending that it should be illegal to employ children of under nine and that the working hours of all other pre-teenage children be limited to eight. Thus could time be found to give all children a rudimentary education.

Some of Chadwick's suggestions were quite revolutionary, as indeed was the brief with which the Commissioners had been issued, which included, among its terms of reference, instructions "as to the effects on children's bodily health of employing them in factories." Chadwick took a wider view of the brief by suggesting ways of preventing accidents. His proposal that factory inspectors be empowered to order the boxing off of potentially dangerous machinery seems eminently reasonable but was then considered gross and unwarranted interference - yet another example of how yesterday's radicalism becomes today's moderacy. Chadwick concentrated his efforts on urging that manufacturers should be liable for accidents in the workplace, drawing up schemes for payment to adults (half-pay sickness benefit) and to children (sickness benefit and medical expenses for all accidents, however caused).

In the ensuing Parliamentary debates various of Chadwick's recommendations were dropped, specifically that relating to employer's liability. The government did, however, decide to limit the working day of all fourteen to eighteen year olds to twelve hours. This, as already explained, was not to Chadwick's liking, in that it constituted interference in "adult" affairs. Nonetheless the government stood firm, despite the pleas of outraged employers who feared ruin if the proposals reached the statute book. The House

of Lords, however, continued to ruin the education provisions of Chadwick's Report and their penny-pinching resulted in most factory children being educated cheaply and inadequately. The right of the factory inspector to examine factory children's reading and writing ability was omitted from the final Bill, as was the clause levying a local rate for the purpose of establishing further schools. Thus children often spent their increased leisure hours not in the classroom but on the streets, where any training they received was certainly not of an academic nature.

Perhaps the most important part of the Bill was its provision of a Board of Factory Inspectors. Chadwick concentrated long and hard on this aspect of the Bill, and the result was what was essentially a new class of officer. Resident inspectors were considered too costly, while the appointment of local J.P.s as inspectors was impractical, since, if they were not themselves factory owners, they were often naturally biased in favour of the owning class. Chadwick's eventual recommendation was that the work of factory inspection should be shared by both resident inspectors and by local J.P.s, and that impartiality could therefore be secured and costs lessened by joint supervision. The authority of the inspectors was to be far-reaching, while their duties included the presentation of regular reports to Parliament as well as periodic consultative meetings for the exchange of ideas. It was also suggested, again by Chadwick, that assistant officers responsible to the Home Secretary be nominated by the factory inspectors.

Once the Bill became law Chadwick's services were dispensed with. His suggestions were ignored, and all responsibility for the working of the Act passed to four inspectors - a hopelessly inadequate number -

three of whom were political appointments.¹ This is significant, in that assignment of a position as important as that of factory inspection should have been dependent upon ability rather than connection.

Those chosen as sub-inspectors, also political appointees, were often inept and ill-informed, inadequacies in part explained by the poor salary which the post carried.²

A combination of circumstances thus contrived to reduce the effectiveness of the Act, and it was with ill-disguised anger that Chadwick observed its limitations and shortcomings. Chadwick's main criticism, however, was reserved for the Whig Government, whom he accused of acting "...from want of forethought, from everything being done *ad hoc* to meet the want or the cry of the day with such an appearance as would satisfy the cry, and often with no care beyond that..."³ Given the very nature of politics, or of "big business", expediency rather than altruism is often the motive for decision-making. Issues as socially sensitive as child labour or health and safety at work must be of more than transient importance, however, and in such instances *ad hoc* decision-making is obviously unsatisfactory.⁴

1 Finer, *op.cit.*, p67

2 *ibid.*

3 *ibid.* p68

4 See also Cmnd. 5034 pp4-5, paragraphs 22 and 23, which are reproduced in Appendix 4, p174

- (b) HUGH SEYMOUR TREMENHEERE (1804-1893)
First Inspector of Mines (1843-1859)

As a Whig, a member of the landed gentry, and a convinced apologist of Edmund Burke (1729-1797), Tremenheere agreed with Burke that, although politics must often rest upon expediency, those in power should, where possible, try to make what is expedient correspond with what is just and right. Like Burke, Tremenheere believed that social reform could only be brought about gradually and in accordance with the so-called "natural trend of events". Neither man had any confidence in what are euphemistically termed "the masses"; the ideal of both was a state governed by a landed aristocracy, in which property was safe and an established church respected.

Since Burke was such an influence not just upon Tremenheere but upon the entire Whig oligarchy, whose thoughts were encapsulated in his writings, it is important that an examination should be made of Burke's theories. Burke studied the state through history rather than through philosophy, appealing to experience rather than to dogmatism. In the same context, Tremenheere distrusted dogmatism of any type, and doubted that society could be reformed by abstract human reason. He believed that men were naturally unequal and that those who were "best fitted" for public office, i.e. those who had been born into the then "ruling class", should naturally rule. Almost inevitably, this led Tremenheere and other leading Whigs well-nigh to worship the system as it then existed, and to underrate the value of new ideas as a stimulant to progress. This is important, as Tremenheere's views on the role of the Mines' Inspectorate, views conditioned by years of lip-service to a paternalistic and now

thoroughly discredited philosophy, are still quoted as almost guiding principles.¹

Tremenheere was appointed as Inspector (or Commissioner, the terms are used synonymously in early official papers)² of Mines and Collieries by the Coal Mines Regulation Act of 1842.³ Two years later, in his "Report on the manner in which the provisions of the Act were observed",⁴ Tremeneheere described the conditions which he had met in several coalfields. He had found that the system of employing females in mining labour below ground had been abandoned (as was required by the 1842 Act), though he suggested that some women might still secretly be evading the provisions of the Act.

Tremenheere showed understanding of the plight of those older women who had become so accustomed to labour in the pits as to be unsuited to anything else. These women, if they were "able bodied", could not claim parish relief in Scotland (where prior to 1842 the employment of women underground had been common). However morally objectionable is underground work, it had at least afforded such women the means of decent subsistence and of comfort, felt Tremeneheere. "Their case merits particular sympathy, in as much as they have been deprived of their former means of livelihood on moral grounds, and with a view to moral results, which concern the rising and future generations far more than they can be supposed to influence themselves".⁵ Tremeneheere lessens the unease which

1 See p120 below

2 O.O.C.M. MacDonagh (1967) p63

3 5 and 6 Vict.c.99

4 H.S. Tremeneheere (1844)

5 Ibid.

he felt for these women made destitute by the 1842 Act by observing that their number at each mine was not great, and was gradually decreasing, while also emphasising the advantages of married women staying at home and attending to their domestic duties.

From a Whig point of view, Tremenheere might have felt uneasy in supporting a law which permitted such suffering to continue in order that future generations might benefit. In so doing, he was taking a position which seems diametrically opposed to that of Burke, who stated:

"I have no great opinion of that sublime abstract, metaphysic, reversionary, contingent humanity, which in cold blood can subject the present time and those whom we daily see and converse with to immediate calamities in favour of the future and uncertain benefit of persons who only exist in idea".¹

This apparent contradiction between Tremenheere and Burke is only superficial, however, in that Burke's reference is only to "those whom we daily see and converse with". Although Tremenheere, in the course of his work, may have visited mining areas to observe and converse with the labouring classes, Burke's reference is quite clearly a reference to his own circle, which did not include pitmen or any of the labouring classes.

Tremenheere describes the considerable outlay needed, in some pits, to enable men or horses to draw coal from the face to the pit bottom, work previously done by female labour. His claim was that the change from the "rude and imperfect mode of working by the aid of females, to the present effectual one...has been brought

¹ Burke, letter to A.J.F. Dupont, post 29 March 1790
Quoted by Conor Cruise O'Brien in the Introduction to Burke
E. (1976)

about in no very long time by the superior efficiency of labour".¹ Similar claims are made today by inspectors who wish to emphasise the correlation between productivity and a "desirable" social system, more particularly between productivity and safety.²

In his Report Tremenheere was also concerned with the loss of a proper sense of gradation and subordination in the mining community. He considered this loss due to the miners

"...conversing and contriving only with each other (as a result of which) they very readily surrender their confidence to persons of their own rank and class".³

(i.e. they begin to take less notice of their traditional "masters" and more of union leaders from their own ranks).

Tremenheere blamed the low wages of the industry upon strikes and upon the colliers regulation of his daily output. The effect of strikes Tremenheere saw as being to compel "...the master to bring new hands into the trade, (hands) who compete with the old a process which naturally results in depressing wages".⁴

Tremenheere was extravagant in suggesting that grievances attributable by the colliers to their masters paled into insignificance beside the injuries which they inflicted upon themselves by their own limitations of their daily output. He tried to discredit the restrictive system of the "darg" (the output of coal to which the colliers limited themselves per shift) by arguing that such restrictions prevented the collier from saving money and from

1 H.S. Tremenheere (1844) p2

2 e.g. an inspector might claim that expenditure on "better" roof supports, on "better" ventilation systems and on "better" haulage systems can each result in increased productivity and increased safety.

3 Tremenheere, op.cit., p7.

4 ibid p8

transferring from his own trade into another, as if this was economically or socially desirable or viable. He proceeded to emphasise his opposition to the "darg" by referring to the

"cruel and lamentable loss inflicted by this self-enforced "regulation" upon all enterprise, zeal and industry. Their (the colliers') enemies...or the decrees of an oriental despot...could devise nothing more contrary to right and justice".¹

While superficially this criticism relates to a restrictive practice, which is inherently undesirable, I would suggest that Tremenheere's altruism is directed towards the coal owners rather than towards the colliers. In the kind of situation which then existed, i.e. of conflict between owners and miners, the collier was liable to lose less from "the darg" through restriction of his earnings than indicated by Tremenheere. More important from the colliers' point of view, however, was that the "darg" was used as a means of "work-sharing", which is inherently desirable and is equivalent to the modern system of "short-time working", which is agreed between both management and men as a means of preventing redundancies. This argument I have advanced in order to demonstrate that the "darg" has merits which Tremenheere neglected.

There can be no doubt that Tremenheere was the friend of the (better) managers and owners. He argued that:

"men possessing the ability which enabled them to call into existence and to carry on their vast works cannot be slow to perceive their interest in so conducting matters as to give no real cause of complaint to their workmen".²

1 H.S. Tremenheere (1844) p34

2 *ibid.*

It is interesting to note that Tremenheere (like Burke) regarded the "status quo", i.e. the then master-servant relationship, as a "natural" system, both right and just.

He emphasised the right of the manager to manage, yet showed a certain flexibility in suggesting that it might be to the owner's benefit if occasionally he were to consider the suggestions of his employees - especially where such suggestions might result in improved (and more profitable) working methods.¹ This approach is both subtle and conciliatory.

Had Tremenheere been alive, it would have been interesting to have had his comments upon Stakhanovism,² the Russian phenomenon of the mid-1930's, a period when there was no limit to the Soviet Union's productive demands. In 1935, Alexei Stakhanov, a coal-miner in the Donetz Basin of the Ukraine, greatly increased the output of his work group through a reorganisation of working methods.³ The story, first published in Stakhanov's own pit newspaper, was taken up by the Soviet Government, who fostered his popularity in order that other workers might be encouraged to achieve higher productivity and greater aggregate prosperity. Since "Stakhanovites" were on piece-work, their greater output was reflected in higher

1 Ibid pp21-22

2 For a brief account of Stakhanovism, see Edelman, Maurice, "How Russia Prepared", Penguin, Harmondsworth, 1942, pp39-42, Citrine, (Sir) Walter, "I Search for Truth in Russia", Routledge, London 1938, pp235, 336, 401 and Sloan, Pat, "Soviet Democracy", Victor Gollanz, London, 1937, p65 et seq.

3 The whole truth of the Stakhanovite story was doubted from the the beginning, and in the post-Stalin period these doubts have been further confirmed. See S.V. Utechin (1961) p511. However, our concern here is with the philosophy behind the propaganda, and not necessarily with the truth of the propaganda.

earnings.¹

Stakhanov used a type of method-study based upon analysis and rationalisation of each operation, a study which resulted in improved productivity through reorganisation of the worker's tasks. This was a positive method of dealing with Tremenheere's "bête noire" - the darg. I feel he would have approved not only of the fact that a mineworker's suggestion had resulted in improved and more productive working methods, but also of the Soviet Government's policy of "highlighting the best"², a philosophy which underlay much of his writing about mines' inspection.

The government-controlled Soviet press found it necessary, at that time, to attack the views of the many mine managers and engineers who had reservations about Stakhanovism. These reservations were twofold, viz. that they regarded organisation of working methods as a management prerogative and objected to workers' wages (increased by higher piece-work earnings) being considerably above their own. These views directly contradicted those of the Soviet authorities, who insisted that the welfare of the U.S.S.R. depended upon the maximum expression of personal initiative by all workers.³

Tremenheere was not particularly opposed to the expression of personal initiative, but he was extremely hostile to the idea of miner's trade unions, saying "it is the idle and indolent who are the

1 By 1937, however, Pravda felt compelled to complain about "the slackening up in the Donetz Mines", ascribing this slackening to idling. The People's Commissars blamed the Mines Directors for not enforcing the laws against idling. "They do not impose fines on those who break discipline and...in turn by their conduct spoil other workers".

2 c.f. *Laudate virtus crescit*

3 c.f. the insistence of Mill and Humboldt on the importance of human development. See p72 below)

most discontented and most active in misleading others". (That he should consider union organisation as being "misleading" is in itself revealing). On the other hand, Tremenheere did highlight some of the miners' grievances (e.g. excessive fines for such things as getting dirt in the coal) and he emphasised the importance of "adjustment" of relations through "frank and mutual explanations". Among the injustices which he discussed and analysed was the truck system, i.e. the practice of paying workmen in goods instead of money or in money on the understanding that they would buy provisions from the employer's shop. This system he saw as an unhealthy monopoly which inhibited the growth of a class of retail dealers and thereby reduced "...the amount and effect of those civilising influences which descend upon the labouring classes from the various gradations above them".¹

In his concern to maintain these "various gradations of society", Tremenheere felt obliged to point out that he considered participation of the "masters" in retail trade as "unworthy employment, and as placing the master in a false position". He felt it "irksome to a wealthy and high-minded proprietor of works so extensive and important...to find himself lying (sic) under the perpetual imputation of cheating his men in such articles as oatmeal and butter".² Tremenheere also argued that if the employee's practice of relying solely on the company store became habitual then all the valuable experience which accrued to the wife or children through "marketing" for themselves would be lost, and the miner would thus be deprived of a standard

1 H.S. Tremenheere (1844) p28

2 *ibid.* p30

by which to estimate wages. (In taking this line Tremenheere was putting forward the attitudes of the capitalist employer, in that the capitalist usually desires his workers to have the same "rationale" towards money as himself, supposing it to be the best means of motivation and control. Miners who do not conform to these values are regarded, from the capitalist viewpoint, as indolent and "unreasonable".)

In his criticism of co-operative truck shops¹ Tremenheere fails to consider the even more "valuable experience" which might accrue to the miner and his family as the result of managing and organising their own co-operative shop. Instead he instances the failure of a co-operative truck shop (one of the very earliest co-operatives, which ran from 1817-1831) as a terrible warning of the unsuitability of workmen to positions of responsibility. It is ironic that Tremenheere should use this particular example, since, as he points out, the failure was due to the fact that the committee men responsible for buying stores were being bribed by the manufacturers. It would be equally apt, and equally foolish, to argue that this case proved the immorality of the entire manufacturing class and their general commercial unsuitability. It seems Tremenheere considered that great wealth and profits pre-supposed morality and that immorality existed only where enterprises were unprofitable. This is a very comfortable philosophy,² but only for the wealthy and successful, in whom it is calculated to produce dangerous complacency and self-

1 H.S. Tremenheere (1844) p30

2 Compare Tremenheere's philosophy with that of the American preacher the Reverend Henry Ward Beecher who had "good news for his affluent flock". J.K. Galbraith (1977) pp55-57

righteousness.

In his Report, Tremenheere quoted Burke in support of his own ideology, believing, like Burke, that bad housing, lack of parental discipline and resultant lack of self-respect combined to produce "dissoluteness of life, rudeness of manners and contempt for authority".¹ The natural consequence of such a state of affairs was a situation in which "every man thinks himself 'as good as his neighbour'...a situation which inevitably results in insulation", i.e. the master-servant relationship becomes impossible, through lack of communication. In turn, this lack of relationship is responsible for the absence in the colliery village of what Tremenheere considered to be a desirable social structure. So strongly did he feel about this that he likened the condition of the colliery village to that of a "herd rather than a society"² this being his paraphrase of Tacitus's³ " *numerus magis quam colonia*", which is literally translated as "a collection of men rather than a (Roman) settlement".⁴

1 H.S. Tremenheere (1844) p42

2 *ibid* p43

3 Tacitus, 1.14.c27, *cit. in ibid.*

4 Since Tremenheere quotes Tacitus at length in furtherance of his argument that the (colliery) village should maintain a "natural discipline, which is the soul of a rightly-constituted state of society", it is important that we should not lose sight of the context in which Tacitus was writing. Tacitus was describing soldiers and ex-soldiers in a military settlement. It is probable that Tacitus would not have supported such a strict system of ranks and discipline in an ordinary settlement. The link between a Roman "colonia" and a Scottish mining village is tenuous. Not so tenuous, however, is the link between Tacitus and Tremenheere in background and outlook. Tacitus, as a well-to-do Roman and one who had, of necessity, served as an officer in the army, believed in a system of ranks. Though Tremenheere had not served in the army (Great Britain in any case was not involved in any major war from 1815-1854) his father had been an officer of some distinction. Tremenheere himself was head boy at Winchester, well-to-do, and held the Whig belief in the importance of a 'proper gradation of society' and of the 'moral superintendence and corrective authority' of the masters.

It is apparent that Tremenheere was unable to see that a social system, with an organised working class leadership, could exist within a colliery village or that there was any alternative to the system of leadership with which he had always been familiar.¹ One can only agree with Tremenheere that outside of the pit the collier's life style was often squalid, debased and without self-respect. However, his thesis that conditions could be improved only by a rigid restructuring of the community within the guidelines of the previously-accepted hierarchy is open to criticism.² That improvement of conditions could be secured by organisation from within the community was an alternative with Tremenheere failed to appreciate and thus to consider. If there is any general criticism that can be made of Tremenheere, it is that he often failed to consider alternative solutions and that his solutions were often based upon non-sequiturs, e.g. that "contempt for authority" was necessarily due to "lack of self-respect".

From the point of view of this thesis, the most interesting and relevant parts of Tremenheere's Report are those in which he discusses safety. On the benefits of supplying pure air to underground working places he wrote:

"considerations of humanity towards the collier are, in the matter of properly ventilating the mine, in most instances strictly reconcilable with the direct interests of the employer".³

1 However, See R.K. Webb, "A Whig Inspector", Journal of Modern History Vol 27 pp354-5.

As a young man he had no youthful radicalism, but was curious about the working classes. "...They would have neither Whig nor Tory" shows essential conservatism.

2 E.g. the criticism of John Stuart Mill that "free people ought never to let themselves be enslaved by any man or body of men because these are able to seize and pull the reins of the central administration". J.S. Mill (1976) p184 First published 1859.

3 H.S. Tremenheere (1844) p9

He regretted that the benefits arising from good ventilation were still overlooked in some mines, and emphasised that as a result of poor ventilation the miner lost his health at an early age and that families suffered and became destitute. He considered it reasonable to expect that humane concern for the working collier would increase,¹ without legislation, and that this would have the effect of reducing the number of works in which the air was bad.²

For a revealing clue to Tremenheere's character consider this paragraph:

"in the meantime, at the first symptom of the revival of the coal trade in that district, it will be in the power of any good and steady workman, on giving the usual fortnight's notice, to leave an ill-ventilated work, and to find ready employment in one which is free from that source of evil. This has already been the effect of the improvements hitherto made. As a general rule, the men of best character and conduct are found at the best regulated works".³

Here we have an example of the then common view that competition was a cure for all evils. However, he apparently believed that safety

1 American slave owners used a similar argument against accusations of ill treatment of slaves, viz. "...I put it to you whether you believe it to be a general practice to treat them (slaves) inhumanely, when it would impair their value, and would be obviously against the interests of their masters". Charles Dickens (1842) American Notes p219. Nevertheless, the reality was that many slaves were indeed branded and maimed by their masters.

2 H.S. Tremenheere (1844) p9. This belief that Divine providence would intervene was not substantiated by events. "The Report for the Select Committee on Mines - 1866" provides adequate evidence of continuing poor colliery ventilation, e.g. "the ventilation is so bad in general that men can scarcely breathe" n234 (The questions and answers are numbered in the report and n234 indicates it was part of the answer to the question 234)

3 *ibid* p9

was conditional upon, and of secondary importance to, the profitability of the coal trade, inferring that safe working conditions were a reward for good and steady workers (as defined by the owners) and not a basic right.

In considering what constitutes a "good workman", Tremenheere employed criteria which today are discredited. He apparently accepted at face value a colliery manager's statement that "the good collier can do with far less timber (since) he knows when it is prudent to prop, and when it may be omitted",¹ i.e. that a "good collier" would omit timber, the consequence of which would be to save the owner money. His remark that many fatal accidents were attributable to the carelessness of miners themselves² is hardly reconcilable with such thinking, in that pressure to co-operate in the saving of timber could always be brought to bear on the collier by the management. His suggestion that the character of the proprietors and employers in itself was "sufficient security to refute imputations"³ that accidents were often caused by their supplying insufficient timber is equally untenable. More rational and useful was his suggestion that, within the industry, a general and public system of recording fatal accidents should be introduced.

Tremenheere consistently put forward the view that the interests of collier and owner were identical, a view very much that of contemporary managers. He did make efforts to persuade owners and

1 H.S. Tremenheere (1844) p38

2 *ibid* p46

3 *ibid* p46

managers that "a kind and considerate and liberal treatment" of workmen would "...be rewarded by reciprocal benefits to themselves".¹ By identifying this reciprocity of interests there is no doubt that Tremenheere contributed to safety in the mines and set the subsequent tone of the Mines Inspectorate.² The present day Mines Inspectorate, everybody's friend and nobody's enemy,³ has always been less than ready to involve itself in cases of conflict of interests. One can only surmise why this has been so, the Mines Inspectorate possibly feeling that it might lose its effectiveness as conciliator and arbiter if it over-concentrated upon situations where safety and productivity were in conflict. It should surely have been a function of the Houghton Main Public Inquiry to consider whether there was any reluctance on the part of the local inspectorate to involve itself in conflict,⁴ and, if proved, whether such reluctance contributed towards any unsatisfactory attitudes held at the colliery to duties laid down by the Mines and Quarries Act.

1 H.S.Tremenheere (1844) p41

2 "In the main, he (Tremenheere) envisaged the Inspector as the learned and experienced guide, counsellor and friend of both mine management and workmen, whose principal objective was, without resort to prosecution under the law, to bring the standard of practice in the less well-managed mines up to that obtaining in the best, a principle that still governs the work of H.M. Inspectors of Mines today". Sir Andrew Bryan (1975) (Sir Andrew Bryan is a former H.M. Chief Inspector of Mines and Quarries who commands the respect and trust of all mining men).

3 Statistical evidence is provided by the fact that there were only ten prosecutions by H.M. Inspector of Mines between 1956 and 1969 inclusive (Annual Reports of H.M. Divisional Inspectors).

4 Two examples of this kind of reluctance, one actual and one hypothetical, are provided:

(a) The Mines Inspectorate's failure to ban the use of chain haulage on power-loaders, despite being well aware of the dangers. Although the Inspectorate undoubtedly, and successfully, exerted pressure on the Industry to find a safer system, it did not prohibit the use of chain haulage, perhaps being over-sympathetic to production requirements.

(b) Consider the dilemma of the Inspector, who, in the interests of good relations, is unwilling to pursue diligently a minor breach of regulations (for example a deputy's incorrect completion of a statutory report) for fear of being regarded as bureaucratic or "regimental".

BUREAUCRACY: THE MID-NINETEENTH CENTURY DEBATE

In the mid-nineteenth century observers of bureaucracy used often to contrast England with the Continent.¹ Leading periodicals invariably included "a self congratulatory rider" on how different things were in Britain, a complacency typified by Carlyle's comment that bureaucracy was "the continental nuisance", a nuisance of which he could "see no risk or possibility in England".² Equally representative of the smugness of mid-Victorian thinking was Bagehot's oft-quoted book "The English Constitution" (1867). In it he minimised the dangers of bureaucracy in England, claiming that English public administration, with its system of parliamentary government and frequent changes of ministers,³ would constantly reinvigorate the administrative process and prevent bureaucracy from sinking into routine.

During this period many observers reiterated points made previously by classical Greek philosophers or, more succinctly and relevantly, by Wilhelm von Humboldt (1767-1835) in "The Limits of State Action" (see p37, including its footnote 1). For instance, A. O'Donnell's "State

1. M. Albrow (1970) pp 21-22

2. T. Carlyle, "The New Downing Street", Latter Day Pamphlets No. IV, (15 April 1850) cit. in ibid. pp 21 and 128

3. While Bagehot's remarks concerning frequent change of ministers might certainly have been true at the time, the date of publication of "The English Constitution" is significant. 1867 marked the culmination of sometimes acrimonious debate on the Second Reform Bill, while the following year there were three different Prime Ministers. Indeed over the forty years prior to 1867 there had been eleven different Prime Ministers and thus little ministerial continuity. In contrast, in the 35 years after 1867 three men (Gladstone, Disraeli and Salisbury) monopolised the office, holding power between them for all but one year of that period. Under such circumstances the reinvigoration argument is less applicable. (I am indebted to Ciaran O'Gallagher for having raised this interesting point).

Education in France"¹ (1836) complained that defects in the bureaucratic machinery could be remedied by the creation of further bureaucratic machinery, a complaint which echoes Humboldt's that "the harmful effect of these (administrative arrangements) necessitates new forms, new complications, and often new restrictions, and thereby creates new departments, which require for their efficient supervision a vast increase of functionaries".² Similarly, J S Blackie's "Prussia and the Prussian System" (1842) contains the comment "that the way in which the Prussian bureaucracy monopolised the intelligence of the nation was detrimental to energy and enterprise outside it, and resulted in submissiveness and servility,"³ "a comment which develops Humboldt's theme that "...men of first rate capacity are withdrawn from anything which gives scope for thinking"⁴.

Humboldt's ideas were frequently echoed by John Stuart Mill (1806-1873) in his essay "On Liberty,"⁵ which examined the nature and limits of the power legitimately exercised by society over the individual. Mill believed implicitly in Humboldt's maxim that "the great leading principle" of life is "the absolute and essential importance of human development in its richest diversity".⁶ Mill was particularly concerned that the result of recruiting the best brains of the country and educating them in a disciplined body for administrative purposes would be "bondage of all, the members of the bureaucracy included". He made the point "that a Chinese mandarin is as much the tool and creature of a despotism as the humblest cultivator. An individual Jesuit is to the utmost degree of abasement the slave of his order, though the order itself

1. cit. in M. Albrow (1970) p 128 (no further details)

2. W. von Humboldt (1969) p 34

3. J. S. Blackie, "Prussia and the Prussian System", Westminster Review Vol 37 (1842) cit. in M, Albrow (1970) pp 22-23 and 128

4. W. Von Humboldt (1969) p 32

5. J. S. Mill (1976)

6. Quoted by Mill on the fly-leaf of "On Liberty" and taken as his theme throughout.

exists for the collective power and importance of its members."¹

It is my contention that each participant in the proceedings of the Houghton Main Colliery Inquiry was as much a slave of his "order" as was the Jesuit, in that he, the individual participant, was tied to a pattern of thinking, by his very training and experience of the industry and by the bureaucratic nature of the Inquiry. This is not intended as a criticism of the competence, impartiality, integrity or intelligence of the Commissioner or of the interested parties, any more than Mill intended his conclusions to be taken as criticisms of these attributes in a Jesuit. The similarity of position is indeed compounded by the fact that Jesuits and Mines Inspectors are typically well-educated and rightminded.

Among the functions of Parliament, Mill suggested,² is the duty "to throw the light of publicity on its (the government's) acts (and) to compel a full exposition and justification of all of them which anyone considers questionable". It is arguable that the present work-load undertaken by Parliament prevents adequate fulfilment of this obligation and that consequently it is the duty of the ordinary citizen to keep a watchful eye upon practices which he/she considers questionable. This duty covers the whole spectrum of government, central and local, as well as the civil service (including the Health and Safety Executive) and the servants of the Crown.

Mill obviously felt strongly that the channelling of a country's elite into government administration was "detrimental to the mental activity and progressiveness of the body (i.e. the governing body)

1. J. S. Mill (1976) See also p150 below.
2. J. S. Mill (1961) p 177

itself". He went on to explain the stultifying effects of bureaucracy and to outline the often imperceptible constraints with which any system has to contend.

"Banded together as they are - working a system, which, like all systems, necessarily proceeds in a great measure by fixed rules - the official body are (sic) under the constant temptation of sinking into indolent routine...¹

How best can "a system" avoid this temptation? Mill's remedy was to make the "system" open to the "watchful criticism of equal ability outside the body..."², stressing that this would provide "the only stimulus which can keep the ability of the body itself up to a high standard..."

In order that his remedy should provide a permanent cure, Mill advocated that "the means should exist, independently of the government, of forming such ability and furnishing it with the opportunities and experience of great practical affairs".³ To some extent the Houghton Main Colliery Inquiry was disadvantaged by having as members persons of similar industrial experience, similar education and similar training. This criticism could not have been levelled at the Inquiry had the Commissioner been appointed from outside the industry.⁴ Furthermore, the opportunity of judging "great practical affairs" (such as the conduct of public inquiries) does now exist, viz. the potential monitoring of such affairs by interdisciplinary research teams drawn from universities and polytechnics.⁵ My thesis has been written in the belief that there should be "watchful criticism" of official and powerful bodies.

1. J. S. Mill (1976) p 184

2. Ibid. p185

3. ibid

4. Other arguments have been put forward for the appointment of a Commissioner other than the Chief Inspector of Mines. e.g. "It is my considered opinion that the Chief Inspector

CHAPTER VII

UNIVERSITY AND STATE, 1815-1831

Continuation of Footnote from page 74

of Mines or any of his assistants should not in future be called upon to conduct formal investigations of this kind. In stating this I do not impute incompetency or unfairness to the Commissioner at this inquiry. I do assert, however that it imposes upon any person directly associated with the Inspectorate a dual loyalty which must inevitably strain impartiality to the furthest limits." The Commission of Inquiry Report. Gresford Colliery Disaster. The conclusion of a minority report of Mr Joseph Jones (one of two assessors). President of the Mineworkers Federation. Report issued by the Department of Mines. 5th February 1937. Sir Henry Walker, the Chief Inspector of Mines, was the Commissioner of the Inquiry. The other assessor was John Brass, a past President of the Institution of Mining Engineers. e.g. "It is not only a question of unconscious bias which anybody in that situation is bound to have, but it is a question...of the public being satisfied that justice has been done and the appearance of justice being done is also present in the circumstances of the tribunal which is inquiring into this matter...". Sir Stafford Cripps discussing the appointment of the Chief Inspector of Mines as Commissioner. Hansard (H.C.) 23rd February 1937. col 1949.

5 Research organisations can also suffer from similar bureaucratic constraints, though this is less likely when the research is interdisciplinary and is independent of government control.

CHAPTER VIIBUREAUCRACY AND KARL MARX (1818-1883)

Marx studied the concept of bureaucracy within the limited context of the state administration.¹ He criticised Hegel's analysis of the nature of the state, the structure of which Hegel visualised as tripartite, viz. the "particular interests" of the professions and corporations ("the civil society") and the "general interests" represented by the state, with the state bureaucracy or public administration forming a bridge between the two. Marx believed that this concept of state bureaucracy was false, an image derived from law books and administrative regulations. He saw the state as representative not of general interests but of the particular interests of "the dominant class", and bureaucracy as an instrument by which that class exercised its domination. He drew the conclusion that the interests of bureaucracy were closely linked with those of the dominant class and that the result of bureaucracy was to impose an order of things which consolidated and perpetuated class division and domination. Equally insidious, Marx believed, was the tendency of bureaucracy to mask this domination by interposing itself as a smoke-screen between exploiters and exploited. On the other hand, bureaucracy had created a certain autonomy, an autonomy which made conflict with masters possible.

Marx would clearly have considered Tremenheere the typical

1 N.P. Mouzelis (1970) pp8-11

bureaucrat, in that he (Tremenheere) interposed himself between exploiter and exploited (owner and worker) while hardly concealing his loyalty to the former. Certainly Marx was scathing in his criticism of Burke, whom he called a "sycophant who, in the pay of the English oligarchy, played the romantic opponent of the French Revolution". While admitting Burke's talent, Marx exhorted his readers to "brand again and again the Burkes of this world" and all those who held to Burke's view that "the laws of commerce are the laws of Nature and therefore the laws of God".¹ Burke's view was undoubtedly Tremeneere's.

Marx's attitude to bureaucracy was that it was oppressive, and, to most people, a mysterious and distant entity which, although regulating their lives, was beyond their control and comprehension. This feeling is an example of the concept which Marx called alienation, a concept used to describe the helplessness and bewilderment felt by the majority of people when confronted with burdensome situations which they do not fully understand and over which they have no control. Consider, as an example, the hypothetical case of an experienced shotfirer who has worked at a mine where, by custom and practice, shots are fired in known breach of the Regulations. That the breach is tolerated implies acceptance on the part of underground officials, while the shotfirer himself breaches the Regulations in the (mistaken) belief that this is "helping the lads along". Suppose, that during an investigation into an accident unconnected with his shot firing,

1 K. Marx (1976) pp925-6

It is a coincidence that on p924 Marx described "the Liverpool 'quality' (as) the Pindars of the slave trade". Pindar (522-442 B.C.) was a Greek lyric poet famous for his triumphal odes to the victors in the Olympic games. It was Tremeneere who published his own translations from Pindar into English blank verse in 1866.

his method of shot firing is highlighted and, as a result, he is prosecuted. When confronted with his misdemeanours in a courtroom, where actions are judged in a way foreign to his experience, he will be at a total loss to explain actions which in his own mind were justifiable.¹ Marx believed that this helplessness is exacerbated by "special myths and symbols", which "sanctify and further mystify" the power of the bureaucrat. The frustration which the shotfirer feels at being unable to explain his actions and his feeling of helplessness, which is reinforced by the mysticism of the courtroom, constitute a classic example of alienation.

Marx himself found analysis of an inquiry into mining conditions² a rich source of material by which to illustrate some of his ideas.

The "special myths and symbols" which Marx claimed "sanctified and mystified" the bureaucrat's position were evident at the Houghton Main Colliery Inquiry, which was held in the most imposing building in Barnsley (the Town Hall), in the most imposing part of that building (the Council Chamber). The Inquiry room had been specially adapted, at some considerable expense, and so resembled a court of law that it was referred to not as "the Council Chamber" but as "the Courtroom". Not only did observers in the public gallery refer to the Inquiry room as the "courtroom", but so too did representatives of the interested parties. The Chairman in his opening remarks referred to the proceedings as "the Court".³ The Chairman was given the title

1 Though this case is hypothetical the resulting 'alienation' could be used to explain the Inspectorate's apparent reluctance to prosecute, although it is unlikely that the Inspectorate would use Marxist terminology. The above case is purely hypothetical. However, it has since been pointed out to me that it is not dissimilar to ICI -v- Shatwell (1965) Appeal Cases 656, in which a shotfirer was prosecuted for a breach of regulations.

2 See below pp80-83

3 See above pl2.

"Mr Commissioner" and the request that he be so addressed was generally observed, while during examination witnesses were obliged, and not for reasons of audibility, to stand in a box similar to that used in a criminal court of law. That answers were addressed to a seated Commissioner, and that witnesses were required to stand for long periods (some for over an hour) further contributed to the stress¹ and alienation undoubtedly felt by some witnesses. All were expected to swear on the Bible, and all did so, many no doubt being unaware of the alternative - that they might affirm. (Here are classic examples of what Marx calls mystification and sanctification.) A member of the National Union of Mineworkers, a drinking companion of some of the miners in the public gallery, was appointed usher (itself a courtroom term), given a black gown to wear, and instructed to announce the Commissioner's entrance, whence, as with the entrance of a judge into a court, everyone stood in silence.

The cumulative effect of these circumstances was to produce a court-like atmosphere which in some respects was not conducive to the efficient gathering of evidence. This the National Coal Board recognised when stating its reservations about the holding of a Public Inquiry, viz,

"...that technical matters could be more effectively and expeditiously dealt with in another way; and...that many witnesses found it an ordeal, and perhaps under conditions of stress their evidence may not have come through in the manner in which they would have wished".²

(Here is evidence of Mill's thesis that bureaucracy leads to "bondage

1 One witness collapsed, while others complained of feeling dizzy.

2 W. Forrest. On behalf of the N.C.B. on its submissions to the Inquiry on the final day.

of all, the members of the bureaucracy included")¹ That no steps were taken to find "another way" with which to "more effectively and expeditiously" deal with such problems is further evidence of the imprisoning effect of bureaucracy. It is unfortunate that this bureaucratic imprisonment (which is as true of the interested parties prior to the Inquiry as it is of the Inquiry itself) prevented the National Coal Board from taking the opportunity ² to suggest how best, in their opinion, the Public Inquiry could be conducted. In stating their reservations about the holding of a Public Inquiry they had identified the problem of stress, but had failed to suggest even the most elementary means by which it could be lessened, e.g. that witnesses sit rather than be required to stand, and that evidence be given from other than a "witness box". The failure to make such suggestions was not exclusive to the National Coal Board, and could indicate that the interested parties agreed to the arrangements regarding how the Inquiry should be conducted because they felt that they did not have the power to change these arrangements. If this is true, it was a tragedy, in that the general intelligence and potential creativity of the representatives of the interested parties were prevented from playing their part in the Inquiry. It is a double irony that this intelligence and this creativity were considered sufficient reason for Public Inquiries into serious (mining) accidents

1 J.S. Mill (1976) p184

2 The Commissioner, in his letter to me, dated , 3 September 1975 (cit, in toto, pp13-14 above), pointed out that "all the interested parties...were consulted and agreed at every stage in the arrangements...(as to) how the Inquiry should be conducted."

to dispense with members of the legal profession.¹

Marx discussed in some detail the "Report from the Select Committee on Mines, together with ...Evidence, 23rd July 1866",² paying special attention to the conduct of the Committee.

"The mode of examining the witnesses reminds one of the cross-examination of witnesses in English courts of justice, where the advocate tries, by means of impudent, confusing and unexpected questions, to intimidate and confound the witness, and to give a forced meaning to the answers thus extorted. In this inquiry the members of the committee themselves are the cross-examiners,..."³

Marx's chief complaint was that the Select Committee, which comprised members of the House of Commons, was "a farce...characteristic of capital", in that among the Committee members were both mine-owners and "mine-exploiters", while the witnesses were mostly coal miners. Because of its "special myths and symbols" he considered a courtroom an inappropriate setting in which to gather information, although he did use what information was gathered as evidence for his critique.

Part of the then central debate on the relationship, balance and interaction between state regulation/supervision and industrial self-regulation/self-help (see introduction) was whether government

1 "Even in the matter of representation at Public Inquiries into serious accidents ...the interested parties agreed a few years ago to dispense with representation by members of the legal profession. This has worked well". M.G.Thomas (1976) p95

2 Report of Select Committee (1866) in I.U.P.

3 K. Marx (1976) p626 (First published 1867).
In what could be said to have been a reversal of roles, perhaps the most pointed and searching examination of witnesses at the Houghton Main Colliery Inquiry came from Mr. Arthur Scargill, representative of the National Union of Mineworkers. There is evidence that this role was approved by members of his own union, one of whom thought "King Arthur" to be "the best Perry Mason in the whole show". It would be interesting to have Marx's view on which group was the "dominant class" in this bureaucratic situation.

inspection would shift responsibility for safe working from the owners. In citing extracts from the 1866 Report, Marx added probably the shortest, but by no means insignificant, contribution to this debate. After quoting evidence which clearly showed ventilation practice to be totally inadequate, he reproduced the following question, asked originally by one of the Parliamentary Committee examiners.

"Do you not think that the effect of having these inspectors examining the collieries so frequently would be to shift the responsibility (!) of supplying proper ventilation from the owners of the collieries to the Government officials?"¹

His comment was made by bracketing an exclamation mark after the word "responsibility", his intention being to emphasise that the question was meaningless, in that there was no apparent "responsibility" to shift.

The inadequacies of the Mines Inspectorate at the time of the Report were highlighted in Marx's extracts, viz,

"Do you think the Mines in your neighbourhood are sufficiently inspected to insure a compliance with the provisions of the Act?" "No; they are not inspected at all...the inspector has been down just once in the pit, and it has been going seven years ...In the district to which I belong there are not a sufficient number of inspectors. We have one old man more than 70 years of age to inspect more than 130 collieries".

and

"...pains are not taken to get air into the workings where men are working". "Why do you not apply to the inspectors?" "...there have been cases of men being

¹ cit. in K. Marx (1976) p633

sacrificed and losing their employment in consequence of applying to the inspector".¹

Marx criticised the alleged identity of interest summed up in the question "Do you not think that the mine owner also suffers loss from an explosion?",² a question put by an examiner who was also a mine owner. While it is true that the mine owner does suffer loss, this philosophy Marx called "impudent", in that self-evidently the owner regarded loss of his profits as comparable in importance to wholesale loss of life. The mineowner's question nevertheless reflected the unitary frame of reference which Tremeneere had emphasised, i.e. that the interests of owner and working man were identical.

Marx continued his discussion of the mining industry by decriing the fact that in 1865 supervision of the Regulations in 3,217 coal mines was the responsibility of only twelve inspectors. He also cited The Times 26 January 1867, in which was quoted the calculation of a Yorkshire mine owner "that, leaving aside the purely bureaucratic activities which absorb the whole of their time, each mine can be visited only once in ten years by an inspector."³ Marx concluded that, given such inadequate inspection, it was not surprising that there was a progressive increase in mining disasters.

Marx, of course, was not interested in tinkering with "the relationship, balance and interaction" between state regulation and industrial self regulation, since it was his intention not to improve

1 cit. in K. Marx (1976) pp632-633

2 ibid p634

3 ibid

BUREAUCRACY AND MAX WEBER (1859-1920)

the contemporary capitalist system but to form a "new society" and to "overthrow...the old one". As far as the mining industry is presently concerned, a "new society" has arrived with nationalisation. It is doubtful if this society is precisely that of which Marx dreamed. Marx's above analysis remains helpful in the search for a greater understanding of the fundamental problem (i.e. "the relationship, balance and interaction between state regulation and industrial self-regulation"), a problem which nationalisation has by no means solved.

The Ascendance of the Authority of the Deputy: A Case Study

Mr Roy Buckley, a miner, 78 years old, was called as a witness at the first day of the inquiry. He and two of his workmates, Messrs Bannister and Woodcock, were blown off their feet by the explosion. When they picked themselves up they decided to make their way out of the pit, but the atmosphere was so dusty that they had to keep contact with each other through touch. They came to a place where they could smell fire, and Mr Buckley decided that they should turn around and go out another way. Mr Bannister took the lead with Mr Woodcock in the middle and Mr Buckley in the rear. The two men behind lost contact with Mr Bannister, and Mr Buckley took the lead.²

1. Silverman (1970) p. 100

2. Woodcock described the situation in his evidence and stated that he owed his life to Buckley's leadership. "...Really he (Buckley) made all the decisions all the way. If he was not there I would still be there..."

CHAPTER VIIIBUREAUCRACY AND MAX WEBER (1864-1920)

Max Weber's analysis of the structure and functioning of bureaucracy (his definition **is discussed** below pp89-91) has been of great influence on subsequent analyses of organisations¹. His concept of bureaucracy will be better understood if examination is made of writings which overlap his writings on bureaucracy, in particular his analysis of authority. Some aspects of his ideas on authority are well illustrated by the following case study, taken from the Houghton Main Inquiry.

The Acceptance of the Authority of the Deputy: A Case Study

Mr Roy Buckley, a miner, 28 years old, was called as a witness on the first day of the Inquiry. He and two of his workmates, Messrs Bannister and Woodcock, were blown off their feet by the explosion. When they picked themselves up they decided to make their way out of the pit, but the atmosphere was so dusty that they had to keep contact with each other through touch. They came to a place where they could smell fire, and Mr Buckley decided that they should turn around and go out another way. Mr Bannister took the lead with Mr Woodcock in the middle and Mr Buckley in the rear. The two men behind lost contact with Mr Bannister, and Mr Buckley took the lead.²

1. Silverman (1970) *passim*.

2. Woodcock described the situation in his evidence and stated that he owed his life to Buckley's leadership. "...Really he (Buckley) made all the decisions all the way. If he was not there I would still be there..."

Mr. Buckley told the court what happened next.

"There was shouting and banging pipes. I was shouting and banging pipes as well, and hoping that someone would hear the call. As I was shouting came the reply of Mr Lee the Deputy, he shouted 'Anybody there?' I said, 'Me and Fred (Woodcock). Have you seen Dick (Bannister)?".

Mr Lee, the deputy, had not seen Mr Bannister. There was then a discussion and disagreement between Mr Buckley and the deputy about the best route out of the pit. However, as soon as Mr Lee said, "this way is the way we're going, I am the deputy", the three of them went out that way.

In his evidence Mr Buckley seemed very much in command of the situation. Mr Forrest, the N.C.B. representative, was attempting to establish that the National Coal Board had acted properly towards Mr Buckley after he had come out of the pit.

"Mr Forrest: Would you not think that (being driven home in the Area Director's car) was being fairly well looked after?

Mr Buckley: No I think that it is disgusting. I would like to say this: I got out of the pit at 10.40. My wife knew I was in the Newhill seam. There were news flashes on television that men were involved in an accident on the Newhill seam. My wife knew I was working in these places. My wife never got to know officially about me being O.K. until I walked up my garden path. That was when my wife knew I was O.K."

One might have expected the relationship between the examiner and witness to have put Mr Buckley in a disadvantageous position in any debate, especially as Mr Forrest is a senior National Coal Board official, with a commanding presence and a persuasive and charming manner. All of these factors did not seem to daunt Mr Buckley.

Evidence was offered that a few days before the accident Mr Buckley had been concerned to find himself working in an area which had a ventilation system which he did not understand. He mentioned to the deputy that he could not tell which was the intake and which

the return to the unit. In contrast, his workmate, Mr Woodcock, when asked about the ventilation of a district on which he was working and about some ventilation door frames, had replied:

"I am not observant like that. When I go to work I go to work and am not bothered what is there or not. I saw the door frames, that's all".

When I interviewed Mr Buckley¹ he was anxious to discuss technical mining questions and he showed unusual interest in wanting to understand metalliferous mining methods, thus indicating to me an attitude less introspective than that of many coal miners. He did not appear to hold particularly favourable opinions about either the knowledge or the abilities of junior officials. He wondered how mining officials were chosen and expressed some doubts about the methods (as he understood them) used at his colliery. I asked him about the disagreement he had had about the way out of the pit after the explosion. Although he believed that his way was safer he had followed the deputy's instruction because "he was the deputy, wasn't he?" It is this acceptance of the deputy's authority which provides a classic example with which to illustrate a particular type of authority.

In his analysis of authority Weber concerned himself with questions central to obedience. "When and why do men obey? Upon what inner justifications and upon what external means does domination rest?"² He distinguished between "power" (where the

1. Personal interview during the period of the Inquiry after Buckley had given evidence.

2. Max Weber (1968) p 212

superior has the ability to force a subordinate to obey) and "authority" (where orders are voluntarily obeyed because the subordinate feels that it is "in the proper order of things", i.e. legitimate, for the superior to give him directives). Quite clearly Mr Buckley believed it was "legitimate" for the deputy to give orders and for him to obey. It would have been physically impossible for the deputy to have forced Mr Buckley to follow him.

Weber, in discussing authority, provided

"...three inner justifications, hence basic legitimations of authority. First, the authority of the 'eternal yesterday... this is 'traditional' domination exercised by the patriarch of the patrimonial prince of yore.

There is the authority of the extraordinary and personal gift of grace (Charisma), the absolutely personal devotion and personal confidence in revelation, heroism, or other qualities of individual leadership.

Finally, there is the domination by virtue of "legality", by virtue of the belief in the validity of legal statute and functional 'competence' based on rationally created rules. In this case, obedience is expected in discharging statutory obligations..."¹

Weber emphasised that, in describing traditional charismatic and rational-legal legitimacies, he was defining "pure types" which one rarely found in reality. Mr Buckley, in explaining that he had obeyed Mr Lee because "he was the deputy", makes clear that his basis for obeying the order, i.e. the "legitimacy of the order", was "rational-legal" in its pure form. During our discussion I kept returning to the question of why he had obeyed the order, and I expected and looked for an answer which indicated some traditional reason for obeying. His answers, however, only mentioned the law, the appointment of the deputy by the manager and the deputy's formal qualifications. Although Mr Buckley had little respect for the actual

1. Max Weber (1968) p 215

mining knowledge of junior officials, I found it interesting that he had respect for their qualifications, i.e. their shotfirers' and deputies' certificates.

At the time of the interview Mr Buckley was still very shocked about the death of Mr Bannister, who was "a mate" of his outside of working hours. In his evidence Mr Lee had been very blunt about not looking for Mr Bannister. This is reflected in his (Mr Lee's) evidence to Mr Scargill:

"Mr Scargill...did it not occur to you to further investigate to see if other survivors could be found?
Mr Lee: No it did not. I have already told you I thought three out of nine was a good average and I was not going to lose those three and me one of them."

In my quite lengthy interview with Mr Buckley he gave no credit to the deputy for coming inbye (i.e. away from the pit bottom) after the explosion to look for him. The impression I obtained indirectly (I did not want to ask leading questions) was that Mr Buckley felt that it was the deputy's duty to look after the men on his district.

I feel that I must digress from my main theme at this point in justice to Mr Lee. After the blast, with dust everywhere, he felt his way around in order to try and find his whereabouts. The conveyor structure was hot. He made his way inbye, with the manride_r as his guide, in order "to get to the lads who were inbye". After about a quarter of an hour he found Messrs Buckley and Woodcock, and not until then did he make his way outbye, having shown a great deal of courage and sense of duty.

During Mr Lee's examination, I felt embarrassed for him when any weakness in his mining knowledge was revealed. I was curious to learn the exact extent of his mining knowledge, but it seemed to me

almost indecent for the examiners to lay the lack of his knowledge naked to the general public. I record this fact not as a confession that I was failing to observe the Inquiry in a detached manner, but in order to ask whether an examiner might be inhibited from probing a witness too deeply, feeling that there was a limit to which a witness ought to be subjected. I certainly doubt whether a courtlike setting is the most effective way of testing the knowledge of an individual, a point made elsewhere.

Weber used the manner in which authority is legitimised as a basis for classifying organisations. An organisation in which authority is of the type shown to have existed between Mr Buckley and the deputy, Weber classified as a bureaucracy. The "validity" of the authority may be expressed in "a system of consciously-made rational rules...", wrote Weber, who emphasised the point that "rationally regulated association with a structure of domination finds its typical expression in bureaucracy".¹ It is common practice to abuse bureaucracy and to equate it with inefficiency and red tape. However, Weber wrote:

"the decisive reason for the advance of bureaucratic organisation has always been its purely technical superiority over any other form of organisation".²

Martin Albrow sets out Weber's characteristics of bureaucracy and provides the following list of Weber's preceding propositions on this legitimacy of legal authority.

-
1. Max Weber (1968) p 954
 2. *ibid* p 73

"(i) That a legal code can be established which can claim obedience from members of the organisation.

(ii) That the law is a system of abstract rules which are applied to particular cases ...

(iii) That the man exercising authority also obeys this impersonal order.

(iv) That only qua (i.e. in the capacity of) member does the member obey the law.

(v) That obedience is due not to the person who holds the authority but to the impersonal order which has granted him this position!"¹

On the basis of these conceptions of legitimacy Weber formulated the following propositions about the structuring of 'legal authority systems' (i.e. bureaucracies).

"(i) Official tasks are organised on a continuous, regulated basis.

(ii) These tasks are divided into functionally distinct spheres, each furnished with the requisite authority and sanctions.

(iii) Offices are arranged hierarchically, the rights of control and complaint between them being specified.

(iv) The rules according to which work is conducted may be either technical or legal. In both cases trained men are necessary.

(v) The resources of the organisation are quite distinct from those of the members as private individuals.

(vi) The office holder cannot appropriate his office.

(vii) Administration is based on written documents and this tends to make the bureau the hub of the modern organisation.

(viii) Legal authority systems can take many forms, but are seen at their purest in a bureaucratic administrative staff".²

Bureaucracy in its most rational forms has (according to Weber) the following characteristics:

"(i) The staff members are personally free, observing only the impersonal duties of their offices.

(ii) There is a clear hierarchy of offices.

(iii) The functions of offices are clearly specified.

(iv) Officials are appointed on the basis of a contract.

(v) They are selected on the basis of a professional qualification, ideally substantiated by a diploma gained through examination.

1. Albrow (1970) p 43

2. *ibid* pp 43-44

Collegiate types of administration could also be based on the above propositions

(vi) They have a money salary, and usually pension rights. The salary is graded according to position in the hierarchy. The official can always leave the post, and under certain circumstances it may also be terminated.

(vii) The official's post is his sole or major occupation

(viii) There is a career structure, and promotion is possible either by seniority or merit, and according to the judgement of superiors.

(ix) The official may appropriate neither the post nor the resources which go with it.

(x) He is subject to a unified control and disciplinary system".¹

These lists are included:

(a) because (according to Weber) these are the characteristics of an organisation which possesses an authority system of the type shown to have existed between Mr Buckley and the deputy, i.e. rational-legal authority,

and (b) because I wish to trace the extent to which these defining characteristics are now part of the mining industry. This I do in the following chapter.

An Act of 1870,² an experimental measure initially restricted

1. Parliamentary Papers: Mining Accidents 1 (1875), Irish University Press.

2. The Mines Act, 1870 1 & 2 Vict. c. 35.

3. Parliamentary Papers: Mining Accidents (1875), Irish University Press.

4. An Act for the Regulation of Coal Mines in Great Britain 1850 13 & 14 Vict. c. 100.

1. Albrow (1970) pp44-45

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CHAPTER IX

THE MOVE TO BUREAUCRACY IN THE MINING INDUSTRY 1835-1954

The Report of the 1835 Select Committee on Accidents in Mines¹ showed confused and contradicting views on safety methods and devices. This confusion was one of the reasons for Parliament's delay in establishing a legal safety code for mines. (In addition there was a strong belief among some of the coal owners that there should be no interference with their private property.) Only when there was greater understanding of mining technology generally, and of safety in particular, could a legal code which claimed obedience be established.

The Act of 1842² embodied the principle of state intervention and the Report of the House of Lords Select Committee (1849)³ accepted this principle by stating that it was Parliament's "imperative duty" to protect the health and safety of miners by statute. The principle of state intervention was qualified in the Report by use of the words "as far as possible" and by expression of the belief that mines were "too various in their conditions to permit the framing of any safety requirement which could be applied generally".

An Act of 1850,⁴ an experimental measure initially sanctioned

1 Parliamentary Papers: Mining Accidents 1 (1835), Irish University Press.

2 The Mines Act 1842 5 & 6 Vict. C. 99

3 Parliamentary Papers: Mining Accidents 2 (1849) Irish University Press.

4 An Act for Inspection of Coal Mines in Great Britain 1850 13 & 14 Vict. C. 100

for only five years, recognised Parliament's "imperative duty" in appointing four inspectors to enquire into "all matters and things connected with or relating to the safety of persons employed" both above and below ground. It also required that plans should be kept and produced for inspection when required, and that fatal accidents should be reported within twenty-four hours.

Tremenheere, in his Commissioner's Report of 1849,¹ regretted that, unlike France, Belgium and Germany, Great Britain had neglected to establish a School of Mines. Action soon followed, and the Royal School of Mines was established in 1851.

Once the reporting of fatal accidents was mandatory a more accurate pattern of fatalities emerged. The Report of the 1852 Select Committee on Accidents in Mines² cited evidence from the inspectors that explosions were not the major source of fatalities (as had previously been accepted) and indicated that occupational diseases probably killed more miners than major disasters.

The 1853 Select Committee³ provided a means of establishing a legal code which could claim obedience from the industry as a whole. This was effected by approving the suggestion that the colliery owners themselves should draft a set of rules which could then be made into law. To consider the preparation of such a code, the Northumberland and Durham Coal Trades Association convened a meeting of representatives of the country's principal coal owners. The Inspectors of Mines and

1 Parliamentary Papers: Mining Districts 1 (1849) Irish University Press

2 Parliamentary Papers: Mining Accidents 4 (1852-53) Irish University Press

3 *ibid*

a deputation of miners were also invited to attend.¹ (Much of the legitimacy of British mining law can be attributed to the practice of involving all sections of the mining industry when new legislation is being prepared. In general, the legislation will contain only those proposals acceptable to the industry as a whole.)

The result of this meeting of representatives was that all parties agreed upon a code of rules, a code included in the Mines Act (1855),² which had to be introduced because the 1850 Act had expired. Under the Act, seven "General Rules" were required to be observed at all collieries, and each colliery was required to establish its own code of "Special Rules", subject to the approval of the Secretary of State.

This code of "Special Rules" approximated to the legal code included among Weber's list of necessary conditions for legitimacy of legal authority. It claimed obedience from members of the organisation (the mine) and from those exercising authority, thus satisfying two of Weber's further requirements. There was, however, one point which the miners felt to be unfair, viz. that miners could be imprisoned for contravening the terms of the Act but masters could only be fined. Alexander McDonald, the leader of the coalminers, was not slow to point out the iniquity of the situation.

The Mines Regulation and Inspection Act of 1860 repealed, but in substance re-enacted, the Acts of 1850 and 1855. The minimum age at which workers could be employed underground was raised to twelve (a

1 See Sir Andrew Bryan (1975) p75 and passim

2 The Mines Act 1855 18 & 19 Vict. c. 108

requirement dispensed with if the child possessed a certificate for reading and writing). The general and special rules were extended and the powers of the Inspectors increased. The 1860 Act also allowed that at individual collieries a checkweighman be appointed, by, and from among, the colliers, his task being to measure the amount of coal won by the men. Notwithstanding the fact that this right was exclusive to the men, the management was still reluctant to concede the legitimacy of the Act, challenging, for example, the appointment of a Barnsley trade union leader as "justice man" (i.e. checkweighman).

On 16th January 1862 the engine beam of the Hester pit in the Northumberland village of New Hartley fractured and fell, blocking the colliery's only shaft. The trapped miners, 204 men and boys, suffocated, the accident having destroyed the mine's ventilation system. Parliament, during that same session, passed the 1862 Act,¹ requiring that collieries have two shafts at least 15 yards apart. Single shaft working had long been deplored in many quarters.² The case for two shafts was now unanswerable.

The provisions of the 1865 Mines Select Committee Report³ were not implemented until 1872. The Coal Mines Regulation Act of that year⁴ is an important step in the bureaucratisation of the mining industry, in that, inter alia, it required that managers possess a Certificate of Competency and that they appoint competent persons to undertake regular inspections. The "General Rules" (of which there

1 An Act to amend the law relating to Coal Mines 1862 25 & 26 Vict. C. 11

2 H. and B. Duckham (1973) pp111-112. See also above, p48, footnote 2.

3 Parliamentary Papers: Mining Accidents 9 (1867) Irish University Press.

4 The Coal Mines Regulation Act 1872 35 & 36 Vict.C. 76

were now 31) were specific and comprehensive.

The Coal Mines Regulation Act of 1887¹ reflected the greater understanding of mining technology, and was concerned, amongst other things, with coal dust explosions, shot-firing and ambulance work. The Act was the direct result of the recommendations of the Royal Commission on Explosives, Mining Explosions and Other Accidents (1879-1886).^{2, 3}

In 1906 a Royal Commission was appointed to inquire into and report upon "Safety and Health in Mines". As a result of this Commission two Acts, the Rescue Work and Breathing Appliances Act 1907 and the Mines Accident (Rescue and Aid) Act of 1910, were passed. In addition, this Commission investigated what measures were necessary to combat the dangers of coal dust. The lengthy evidence of leading mining engineers revealed many conflicts of opinion, which led the Commission to refer the whole matter to a Committee (The Explosions in Mines Committee, which published a Report in 1907. This Report was indecisive, in that the Committee felt unable to reach any conclusions without first undertaking "large scale experiments" into coal dust explosions. Subsequently, facilities were provided by the Mining Association of Great Britain at Altofts Colliery, Yorkshire, while at a later stage the apparatus was transferred to a new site at Eskmeals in Cumberland, where experiments were financed by the Home Office. The Explosions in Mines Committee directed this and subsequent research and issued a series of Reports dealing with the

1 The Coal Mines Regulation Act 1887 50 & 51 Vict.C.58

2 Parliamentary Papers: Mining Accidents 10 (1881), Irish University Press

3 Parliamentary Papers: Mining Accidents 11 (1886), Irish University Press

use of stone dust to dilute dangerous concentrations of coal dust.¹

The 1906 Royal Commission had appointed other Committees, one to inquire into aspects of ventilation and another into accidents arising from "Falls of Ground, Underground Haulage, and in Shafts". Both produced influential Reports^{2, 3}. However, the most important legacy of the 1906 Commission was the Coal Mines Act of 1911⁴, which incorporated many of the suggestions of the Commission.

The 1911 Act specified a colliery organisation which possessed many of the characteristics by which a bureaucracy in its most rational form is defined⁵, viz. Section 2 of the Act required that every mine be under the control and direction of a manager and that the manager hold a First Class Certificate of Competency. Section 35 required the mine manager to appoint a sufficient number of competent officials to supervise adequately all operations in and about the mine, and to enforce the Act and Regulations. A hierarchy of offices was specified, i.e. managers, undermanagers, overmen (officials between undermanager and deputy) and deputies (who were also known as firemen or examiners). Divisions of labour were specified, so that the total organisational objective could be divided into individual tasks and defined in a precise manner, e.g. Section 14 - Deputies, Section 57 - Winding Enginemen, Section 66 - Machinery Inspectors. The manager had to appoint these persons in writing. The operations of the organisation were governed by a system of rules contained either

1 Reports of Explosions in Mines Committee (series of seven Reports: Cmd. 6307, 6430, 6704, 6791, 7132, 7638 and 8122) HMSO London 1912-1915.

2 Report of Committee on Ventilation of Coal Mines and the Methods of Examination for Firedamp. HMSO (Cmd 4551), London 1909.

3 Report of Committee on Accidents from Falls of Ground, Underground Haulage and in Shafts. HMSO (Cmd. 4821), London 1909.

The above references from Sir Andrew Bryan (1975) p186

4 The Coal Mines Act 1911 1 & 2 Geo.5. c.50

5 See pp89-91 above

in the Act or in Statutory Instruments which could be promulgated under the provisions of the Act.

That the process of rationalisation inevitably entails the growth of bureaucracy is thus confirmed by even the most cursory examination of the 1911 Act. On more detailed analysis it will be seen that at least seven of the ten defining characteristics of bureaucracy outlined by Weber¹ were applied to the management of the mine. However, there is evidence that the first of Weber's characteristics (i.e. that "the staff members are personally free, observing only the impersonal duties of their offices") did not always apply, in that staff members were not "free", often, for example, depending for their initial appointment and continuing employment on factors other than their efficiency in "observing the impersonal duties of their offices".² Consider, for example, the following comments on prenationalisation conditions under the 1911 Act, comments made during the second reading of the Mines and Quarries Bill of 1954:

"...it was asked whether the (coal) owners were Tories or Liberals...we found that they were just as ruthless whether they were Liberals or Tories. What we noticed most that (sic) if the owner was a Liberal the manager was a Liberal and that if the owner was a Tory the manager was usually a Tory, because they were dependent upon that ownership for their livelihood."³

The 1911 Coal Mines Act gave the (unspecified) Secretary of State the power to vary and amend any of the "Provisions as to Safety" contained in Part II of the Act and to make, by Order, General

1 See pp 89-91 above.

2 In a bureaucracy (whether or not of Weber's ideal type) the mine manager's ability to discharge the "impersonal duties of his office" should be the criterion by which to judge his capability and performance. "Freedom" and "dependence" are both explicitly defined within the rules of a bureaucracy (e.g. conditions of employment/recruitment, job description and performance), c.f. "patrimonial bureaucracy" of Weber.

3 R.J. Taylor M.P. Hansard (H.C.) 21 January 1954, col 1245

Regulations. From 1911-1954 no major measure solely related to health and safety came before Parliament. During this period legislation consisted mainly in the implementation of General Regulations recommended in reports of inquiries into mining disasters and into particular mine safety problems.

A Royal Commission was appointed in December 1935 "to inquire whether the safety and health of mine workers could be better assured by extending or modifying the principles of the Coal Mines Act 1911 or the arrangements for its administration". The Commission was asked to make recommendations, which were duly put forward in the Report published at the end of 1938. Among these recommendations was one concerning the structure of mining legislation, viz. that future Acts should be confined to matters of principle. Technical details, it was further recommended, could be better dealt with by General Regulations and Orders, which should be open to change in the light of changing conditions and experience, without the delays inherent in the passing of new Acts.

The advent of war in 1939 prevented Parliament from proceeding with legislation designed to implement these recommendations. After the war, by means of General Regulations, modifications were made to the law concerning lighting, ventilation, support of roof and sides, and training, but it was not until the early 1950's that work began on a new Bill. By this time, as a result of the nationalisation of the coal industry in 1947, many of the recommendations of the 1935 Royal Commission were rendered inappropriate, especially those related to the organisation and management of the industry. It will be remembered that the 1872 Act had stipulated that a mine should be

'under the control and daily supervision of a manager holding a Certificate of Competency'. However, the role of the colliery manager had changed in the intervening period; no longer was he employed by a company which perhaps owned only one colliery; he was (after 1947) in a position where he fell increasingly under the pressure of 'superior' officials who possessed technical expertise.

The difficulties of a manager under the kind of pressure described above are highlighted in the 1951 Report¹ on the Knockshinnoch Colliery (Ayrshire) Disaster of the previous year. Number 5 heading of Knockshinnoch's South Boig district followed a rich portion of the Main coal. It is not unusual, in an area as fault-ridden as that in which the Colliery was situated, for coal seams to be subject to severe gradients, and no one was surprised when the heading started to climb at a much steeper rate than that which the National Coal Board sub-area planning department had predicted. Indeed some junior officials at the colliery believed that it was official policy to drive through to the surface in order to provide for additional ventilation. However, no one at the colliery was concerned that the planners had underestimated the gradient of the seam's outcrop, such variances being an inevitable part of mining; at the pit level of management allowances for discrepancies between plans and reality have to be made continually. The management at the Knockshinnoch pit were unaware, however, that peat lay immediately above the heading. As Sir Andrew Bryan pointed out in the Report, the position of this peat deposit was shown on the

¹ Cmnd 8180

geological survey map of the district, which had been consulted by the planning department. The symbol indicating the presence of peat had not been transferred to the colliery's plan, however.¹ The Report lamented the "lack of effective liaison between planning engineers and management and between planning engineers and surveyors", because those who knew of the danger of the peat were unaware of the precise position of the heading, while those who were aware of the precise position of the heading did not know about the peat. No one was convicted as a result of the subsequent legal proceedings, the court being unable to decide how personal responsibility for the disaster should be apportioned, i.e. whether responsibility lay with the mine manager, or with his superiors. The net result of this uncertainty was that the relationship between a manager and the hierarchy above him was more strictly defined by the 1954 Mines and Quarries Act and Regulations, as a further result of which the duties of superiors had henceforth to be specified in writing. This was considered desirable by some members of the House of Commons, one of whom (Sir V. Raikes) gave his approval thus:

"...there have been accidents in the last few years where it has been possible to get damages against the National Coal Board, but it has not been possible to bring the case home to individuals whose own mistakes may have contributed to the damage.

...(with the 1954 Mines and Quarries Act) I think it will be easier, in the event of disaster taking place, not only for the owners...the National Coal Board, but for individuals who have great responsibility to be brought to book if that be necessary. If that be so, it is an advance which we should all welcome"?

1 Cmnd 8180

2 Sir V. Raikes Hansard H.C. 21 January 1954 Col 1252

The 1954 Mines and Quarries Act made management of each coal mine more bureaucratic, by further specifying the functions of officers, by further establishing a clear hierarchy of offices and by further subjecting the individual employee to a unified control and disciplinary system. It was, moreover, instrumental in further bureaucratisation of the entire industry. As such, the Act was the inevitable conclusion to a century of increased rationalisation/bureaucratisation.

As Weber's bureaucracy, it is essential that a study be made of criticisms of Weber's model. This, it is hoped, will add to our understanding of the functions of safety legislation. If critics are able to show that bureaucracy, as defined by Weber, does not maximise administrative efficiency, it might follow that the organisation of the mining industry, which has been shown to possess many identical characteristics, does not maximise its efficiency, in particular as regards accident prevention.

Weber's description of bureaucracy has been used, by various writers,¹ as a model of an organisation which maximises efficiency in administration. They (the writers) then take this model and "contrast it with the 'facts' and test it in the light of empirical research in modern organisations".² Mouzelis, among others, is highly critical of this methodology, claiming that such writers have not understood Weber's concept of the "ideal type". It is generally held that an "ideal type" is not necessarily typical, logical, simple or extreme; neither did Weber intend that his ideal

1 The title of an article by S. E. Barton (1936)

2 Such as P. Blau and W. P. Scott (1930)

3 M. P. Mouzelis (1975) xviii (this is an edition later than that cited in the bibliography.)

CHAPTER X

"THE UNANTICIPATED CONSEQUENCES OF
PURPOSIVE SOCIAL ACTION." 1

Since the British coal mining industry, as defined by mining law (i.e. the Mines and Quarries Act (1954) with its Regulations), has been shown to possess many of the characteristics of Weber's bureaucracy, it is essential that a study be made of criticisms of Weber's model. This, it is hoped, will add to our understanding of the functions of safety legislation. If critics are able to show that bureaucracy, as defined by Weber, does not maximise administrative efficiency, it might follow that the organisation of the mining industry, which has been shown to possess many identical characteristics, does not maximise its efficiency, in particular as regards accident prevention.

Weber's description of bureaucracy has been used, by various writers,² as a model of an organisation which maximises efficiency in administration. They (the writers) then take this model and "confront it with the 'facts' and test it in the light of empirical research in modern organisations".³ Mouzelis, among others, is highly critical of this methodology, claiming that such writers have not understood Weber's concept of the "ideal type". It is generally held that an "ideal type" is not necessarily typical, logical, simple or extreme; neither did Weber intend that his ideal

1 The title of an article by R.K. Merton (1936)

2 Such as P. Blau and W.R. Scott (1970)

3 N.P. Mouzelis (1975) pxviii (This is an edition later than that cited in the bibliography.)

type be regarded in any sense as good or noble. The ideal type, according to Weber, is "the construction of certain elements of reality into a logically precise conception".¹

The arguments and quarrels about methodology in which some sociologists indulge are difficult to follow (especially those concerning the concept of 'the ideal type'). The comment that "...the bulk of the best and most original work in the physical sciences has been done by people...untroubled by problems of the methodological justification of their subject"² does appear as comforting counsel. However, in trying to understand the importance which many sociologists attach to discussion of the role of a particular model, the thought does occur that perhaps academics professionally involved in the study of safety ought to be more concerned with the precise function of the law relating to safety. Current mining law, for instance, is a type of model 'set out to achieve a safe working environment'.³ A fundamental issue, analogous to sociological discussions about 'ideal types', is whether the safety law is an idealisation. Does it relate to desired (and unattained) standards, or to minimum standards? Blau and Scott discard Weber's "misleading" concept of the ideal type in order to exploit his "insightful theoretical analysis" about organisations. They argue that Weber's ideal type is an admixture of a conceptual scheme and a set of hypotheses, and contend that Weber provides a definition of the concept (of bureaucracy) by

1 M. Weber (1948) p59. For a full discussion on "ideal types" see Mouzelis (1970) pp38-54.

2 D.G. MacRae (1974) p48.

3 Robens Report, Evidence, p362.

specifying as bureaucracies those organisations which exhibit a certain combination of characteristics. Such a conceptual scheme, they suppose, provides an important framework on which to base analysis and research, but is neither correct nor incorrect. Because Weber suggests that many of the characteristics defining a bureaucratic organisation are interrelated (e.g. a hierarchical structure and the existence of formal rules are assumed to contribute to co-ordination), Blau and Scott argue that the 'ideal type' contains a series of hypotheses. They also claim that careful reading of Weber indicates that he tends to view elements which contribute to administrative efficiency as bureaucratic, and that this contribution to efficiency constitutes the criterion by which is judged the 'perfect' specimen embodied in his ideal type. Whether elements contribute to efficiency singly or in combination (they further claim) is a question of fact not of definition, and is subject to empirical testing.

Weber (correctly) predicted that bureaucratic organisation would advance, and that this advance would be solely attributable to its technical superiority. Albrow interprets this assertion as a belief, on Weber's part, that any rationally-planned organisation must needs take on the characteristics by which Weber defined a bureaucracy. Albrow emphasises that to Weber the term "rational" means the expert formulation and application of rules which eliminate arbitrariness. This does not imply that Weber saw

rational bureaucracy as necessarily efficient^{1, 2} Throughout his life Weber was concerned with the development of rationalisation in Western civilisation. He was profoundly committed to the cause of reason and freedom and "his research left no doubt that reason and freedom in the Western World were in jeopardy".³ Whereas Sigmund Freud's life (1856-1939) was devoted, "after comprehending the depth of man's irrationality", to the safeguarding of "man's reason", Weber sought to safeguard the great legacy of the Enlightenment, after fully exploring the historical preconditions of the legacy.⁴

In his historical studies Weber examines the major world religions and traces the economic development from feudal times. His study of Confucianism and Puritanism illustrates the paradox of rationality.⁵ Whereas in China Confucianism deliberately sought to maximise the well-being of the people and exalted material welfare above all other goals in life, Puritanism rejected the pursuit of wealth as an end. Devout Confucianism did not enable the Chinese to achieve even a modicum of material wealth, however, while Puritanism, on the other hand, unintentionally created a methodical way of life and an economic mentality which led to an increase in wealth. As

1 M. Albrow (1970) p63

2 See also D.C. MacRae (1974) p68

"An act, to Weber, is rational when it can be described as being in accord with the canons of logic, the procedures of science or of successful economic behaviour; that is to say, when it is end-attaining in its intentions and in full accord with factual knowledge and theoretical understanding in its means."

3 R. Bendix (1969) p9

4 *ibid*

5 *ibid*, *passim*.

Wesley pointed out, this wealth jeopardized "true religion".

Weber believed that Confucianism and Puritanism represented two comprehensive but different types of rationalism. Each "mapped out" an internally consistent, intellectual ordering of human life, based on certain ultimate beliefs. The Confucian aimed at attaining and preserving a "cultured status position", and in order to reach this position he used "adjustment to the world, education and self-perfection, the polite gesture and the observance of proprieties, the enjoyment of wealth as opposed to acquisitiveness, esthetic refinement as opposed to specialised skills, and above all, familial piety as the model conduct..."¹ The rationalism of the Puritan had a different meaning. The "moral bookkeeping of daily life" and the control of one's nature were "tools in the service of God", a service which led to mastery of the world. The Puritans were ascetic, whereas the Confucians were esthetic. The Puritan's ascetic conduct and enthusiasm for action, which (according to Weber) contributed to the autonomous capitalist development in the West, had failed to develop in China.

We see in this example that Weber was well aware of the sometimes strange relation between what men intend by their acts and what results from them, even when those acts are rational. What holds true of Confucianism and Puritanism may equally hold true of other "rational philosophies", including the philosophies of bureaucratic organisations.

1 R. Bendix (1969) p141

Marx noted that entrepreneurs seek profit and direct their efforts to this anticipation, but that the unanticipated consequence is often the propagation of market gluts and economic depression. A leading French sociologist, Emil Durkheim (1858-1917), argued that the high suicide rate among Protestants (higher than among Catholics) was due to the unanticipated consequences of conformity to values unconnected with suicide rather than to their conformity to any cultural prescription concerning suicide. These unanticipated consequences are not dissimilar to consequences of adherence to the Puritan and Confucian philosophies, which are discussed above.¹

In the 1930's, R.K. Merton dealt, in a general way, with the paradox between intent and result, giving, in an influential paper,² a systematic and scientific analysis of what he called "the unanticipated consequences of purposive social action". In a later article³, Merton criticised Weber for neglecting the unanticipated consequences of the various characteristics by which he (Weber) defined bureaucracy. "The positive attainments and functions of bureaucratic organisations are emphasised", wrote Merton, "and the internal stresses and strains of such structures are wholly neglected".⁴

As early as the 1790's, long before Weber had constructed his 'ideal type', W. von Humboldt⁵ had clearly recognised some of the disadvantages associated with bureaucracy. He saw that a great deal of time had to be spent by members of a bureaucracy dealing with

1 E. Durkheim (1952) See also Chadwick re.confidentiality, p51 above.
 2 R.K. Merton (1936)
 3 R.K. Merton (1940)
 4 op. cit, p561
 5 W. von Humboldt (1969)

"...mere symbols and formulas of things", and that the intellectual power of "men of first rate capacity,..suffers" as a result, since "men more and more lose sight of the essential object and concentrate on mere form".¹

Merton gives an explanation of these and other dysfunctions² of bureaucracy. In order that bureaucracy can attain a high degree of reliability of behaviour and of conformity with prescribed patterns of action (Merton believes) the bureaucratic structure exerts upon the official a constant pressure to be "methodical, prudent and disciplined". In a bureaucracy there are definite arrangements for inculcating this type of behaviour. To describe cases where the duty of the member to conform to the pattern is often more intense than is technically necessary, Merton introduces the concept of a "margin of safety". The pressure to conform with which the individual is faced almost inevitably leads to a transference of his/her mental feeling from the aims of the organisation to the particular details of the behaviour required.

Reference to Section 66 of The Mines and Quarries Act (1954) provides a useful example of Merton's "transference of feeling". Contained within Section 66 is the statement that "a person who takes or has in his possession below ground...any cigar or cigarette, any pipe or other contrivance for smoking, or any match or mechanical lighter, shall be guilty of an offence". Conformity to the strict letter of this Regulation is technically unnecessary, in that it

1 op. cit, p34

2 "Function" has a special meaning in sociology. In Merton's terms, "function" can be regarded as the diagnosed objective consequences of a certain social phenomenon, while "dysfunction" implies "unhelpful" unanticipated consequences.

would not cause danger if, for example, an electrician called underground to attend to a breakdown were to take his cigarettes (without matches or mechanical lighter) with him.¹ To take this point further, consider the following data, obtained from and during the Houghton Main Inquiry. A cigarette end was found the day after the explosion in the Meltonfield Main Intake, although it was established that this had no direct link with the explosion. I asked miners in the area, "What do you think about the cigarette end they found?" The answer of a Houghton Main haulage man summarises the other views:

"God knows what they will think about it at other pits. What I reckon happened was someone who worked on the surface for part of their time got called underground in a hurry and found a "dog end" in his pocket, panicked and threw it away. I would have done the same. It's a wicked thing to have fags in the pit. If I found that I had a "dog end" on me I wouldn't even tell my father about it and he's been dead for some years".²

Here is clear evidence of a rule designed to be of "instrumental value" which is regarded as being of "terminal value", viz. that the breaking of the rule itself is regarded as 'wicked'. However, in the case of this Regulation, it would be difficult to argue that such "internalisation of the rules" (as the technical name for this phenomenon is called) is anything but highly desirable.

Mr Oscar Wright, the Superintendent of the Mines Rescue Station at Doncaster, provided insight into another attitude towards the

1 Such is the thoroughness with which, throughout my mining career, I have been inculcated with the idea that in no circumstances must contraband of any kind be taken below ground, and so delicate is the entire issue, that I found it difficult even to make this statement, though it is not a suggestion but merely part of a wider argument.

2 Information received from the son of a former undermanager who has himself been dead for some years, suggests that he, the father, suspected, in the 1950's, that an underground worker was smoking in the pit bottom during a shift. This point is made only in passing, and in order to show how unusual an occurrence it was.

Regulations. Under the Regulations the captain of a rescue team is not allowed to proceed without a plan of the relevant part of the mine. During the rescue operations at Houghton Main these plans were not available, but the rescue teams were nevertheless sent in without them.

"Mr. O. Wright:...I put rescue men in without plans to try and save life. Had I waited until I obtained correct plans I would have felt remiss in my duties. In doing so, I said that in no way did the absence of plans for the initial teams going underground affect the rescue operations.

Mr. A. Scargill: In other words, Mr. Wright, Regulations 34(2) is of no consequence?

Mr. O. Wright: I did not state that. As far as ever it is possible, I will adhere to Mines Regulations and strictly adhere to them, but I make no bones about it, if life is at stake, I, as well as a number of other persons, will bypass Mines Regulations in an endeavour to save life.

Mr. A. Scargill: No one will deny that is the correct thing to do if life is at stake..."

During the lunch break after the above evidence several people present at the Inquiry expressed disapproval of Mr. Scargill's questions, since he seemed to be "dropping Oscar Wright in it". It was considered vindictive to confront a conscientious official with an infringement of the law. The view was expressed that "everyone who has worked down a pit knows it's impossible to stick to the Regulations all the time".

However, at a later stage in the Inquiry, the importance of this evidence became more apparent. The Commissioner, in his Report, stated :

"96...The rescue plans which were available in the rescue room were six months out of date and the most recent revision, that of March 1975, albeit still not representing accurately the Newhill seam ventilation circuit, had not been distributed. This was a task which the safety engineer agreed was the responsibility of his department".

The case of Mr. Oscar Wright is thus confirmed as one in which a conscientious official was forced to break the law because other officials had failed to carry out their particular responsibilities.

At the time of his giving evidence the general opinion seemed to be that Mr. Wright took the correct decision. It was only later, through the diligent examination of Mr. Wright's reason for breaching the Regulations, that the potential consequences of the negligence of the unit surveyor and safety engineer became apparent. Later in the Inquiry it was established that the commendable speed of the rescue team was responsible for the rescue of Mr. K. Upperdine, who was badly burned and severely injured by the explosion. Had the decision been taken that on no account were Regulations to be breached, the only consequence would have been to adversely affect the speed with which Mr. Upperdine was rescued. This would surely have constituted a prime example of a dysfunction of bureaucracy.

My impression, based upon interviews with miners and junior officials in the Barnsley Area during the period of the Inquiry, upon my own observations (in 1972-1973) of officials at work in the Cannock Area, and upon personal working experience in the industry, is that individual Regulations (apart from that concerning contraband) are rarely internalised. This can perhaps be explained by the fact that "there is...considerable emphasis on the need to understand the law in the requirements for the various certificates of competency and for training".¹ (This explanation is substantiated from my observations of training in the Staffordshire Area)

Another reason for Mr. Wright's expressed reluctance to adopt a rigid approach to the Rescue Regulation could have been the precedent

1 Robens Report. Vol.2 Selected Written Evidence, p361

set during the Knockshinnoch Castle¹ rescue. On that occasion rescuers wearing breathing apparatus tunnelled through to 116 men trapped underground. The rescue route was pervaded with dangerous gas, but the use of approved underground rescue breathing apparatus by so many trapped men, many of whom were untrained in its application, was quite impractical. The directors of the rescue operation decided that Salvus breathing apparatus, which was not approved for use in mines, should be used. As Sir Andrew Bryan commented in the Official Report, "the decision to use it (the Salvus) was not only triumphantly justified by the results but was right in principle". Mr Wright's decision could also be said to have been "triumphantly justified by the results", results less spectacular but no less praise worthy.

The coal mining industry has escaped some of the worst features of "internalisation of rules and regulations". When asked to describe their work, National Coal Board employees whom I interviewed without exception volunteered the information that safety was the most important aspect of their job. In the course of these interviews many miners and officials qualified their remarks about safety with almost the same words: "Mind you, if you kept to the Coal Mines Act to the letter, you would never get any coal out".²

1 Report on the Knockshinnoch Colliery (Ayrshire) Disaster, 1951. (Cmd. 8180)

2 This sentiment is by no means exclusive to the Barnsley Area - it is also a common expression among miners in North Staffordshire.

Since many of those whom I interviewed joined the industry after the Mines and Quarries Act (1954) had replaced the 'Coal Mines Act' of 1911, their reference to such an Act provides prima facie evidence of mining folk lore. That there was some basis of truth in this lore is evidenced by the oft-expressed belief that the 1911 Act could not work. Aneurin Bevan, for instance, was moved to say, in reference to his experience as a collier in South Wales during the early working of the 1911 Act, that "...the pit was always in violation of the Act. It is almost impossible to fit the physical circumstances of the colliery into the four corners of a statutory framework".¹

These attitudes help to explain why, in most instances, mining law has not become dysfunctional (even though the 1911 Act obviously became "dysfunctional" when mining leaders such as Bevan used management contraventions of the Act as a weapon in the industrial negotiating armoury). The scant regard with which Bevan and his contemporary union leaders viewed the 1911 Coal Mines Act² destroyed one essential prerequisite for bureaucracy, i.e. "that a legal code be established which can claim obedience from members of the organisation". The legal authority of the 1911 Coal Mines Act can hardly have been regarded as "legitimate" by men whose leaders were seen to adopt so disparaging a position. Deprived of its "legitimate" base, the 1911 Act was unlikely to claim universal obedience within the industry, and without universal obedience bureaucracy is unable to flourish. A combination of technological progress, better

1 Aneurin Bevan M.P. Hansard(H.C.), 21 January 1954, Col.1221

2 Aneurin Bevan also attacked the 1954 Mines and Quarries Bill, calling it 'rotten'. Hansard (H.C.), 21 January 1954, Col.1223.

CHAPTER XI

training of underground personnel and more comprehensive and rational legislation (The Mines and Quarries Act (1954) and its Regulations) has now resulted in a comparatively "legitimate"

base. Folk-lore, however, has apparently failed to take cognizance of these relative improvements.

Disciplined action and conformity can be obtained other than by rules. The Mines Inspectorate obtains conformity by recruiting staff who have similar professional backgrounds, who are already known to the Inspectorate and who are judged to be able to "fit into the job". In addition, members of the Mines Inspectorate are discouraged from involving themselves officially in matters outside their professional viewpoints, especially in matters which the Inspectorate regards as "speculation on human behaviour" and "conjectural opinions".²

Merton predicts that conformity such as that evidenced by the Inspectorate increases the esprit-de-corps and informal social organization of the group and leads to entrenched positions, as a result of which a defensive informal organisation tends to arise, whenever there is an apparent threat to the group. This prediction was borne out by the following incident. At the Symposium on Health, Safety and Progress, at Harrogate, on 27th-29th October 1976, J. L. Collinson tentatively suggested³ a "new (type of) safety professional", with a career pattern different from that of members of the present Mines Inspectorate. There was overreaction and somewhat bitter hostility on the part of the Chief Inspector of Mines to this idea, a hostility warmly applauded by his staff and sympathetically received by others in the audience, most of whom were mining engineers.

As Merton points out, in writing generally about such situations,

1. See p126, below.

2. Professor L. J. Thomas "An Outsider's View on Safety and Health in the Coal Industry in Britain." p 5. An unpublished "stop leave" report.

3. J. L. Collinson (1976)

CHAPTER XI

THE MINES INSPECTORATEa) The Inspectorate and conformity

Disciplined action and conformity can be obtained other than by rules. The Mines Inspectorate obtains conformity by recruiting staff who have similar professional backgrounds, who are already known to the Inspectorate and who are judged to be able to "fit into the job".¹ In addition, members of the Mines Inspectorate are discouraged from involving themselves officially in matters outside their professional competence, especially in matters which the Inspectorate regards as "speculation on human behaviour" and "conjectural opinions".²

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1. See p126, below.

2. Professor L. J. Thomas "An Outsider's View on Safety and Health in the Coal Industry in Britain." p 5 An unpublished "study leave" report.

3. J. L. Collinson (1976)

it is too facile, as well as being in part erroneous, to characterise such resistance to change as "simple vested interest". It is, however, natural that new systems should be resisted and feared by interests which have long enjoyed the particular advantages of an existing system, but probably more significant is another process, that of "sanctification...through affective involvement in spheres of competence and authority". This "process of sanctification" results in a development of "prerogatives involving attitudes of moral legitimacy which are established as values in their own right, and are no longer viewed as technical means for expediting administration",¹ (or, in this case, "safety"). The consequences of such "attitudes" can be desirable or undesirable, Merton referring to "trained incapacity", a situation "in which one's abilities function as inadequacies or blind spots." This tendency is summed up in the phrase "a way of seeing is also a way of not seeing."

Mines Inspectors have contributed to defining, by improved legislation, how best a mine should operate safely, a contribution made the more effective by lessons learnt from accidents. The merits of various mining methods and possible improvements of these methods are fully debated by the mining profession, the Mines Inspectorate, consisting of leading mining engineers, playing a prominent part. The Department of Trade and Industry, in its written evidence to the Robens Committee, extolled the law (the Mines and Quarries Act) by stating that "an examination of recent reports shows that well over half the serious accidents since 1 January 1969 could have been avoided by strict compliance with the law, coupled with ordinary care by the victim and/or his colleagues."² However, had the Inspectorate devoted more attention to law enforcement, could any of these "avoidable" accidents have been prevented?

1. R. K. Merton (1940) p 565
 2. Robens Report Vol. 2 Selected Written Evidence p 363

Conversely, could those accidents considered "unavoidable" have been prevented if the Inspectorate had devoted more of its attention to further improving safety legislation?

More specifically, consider again the case of Mr Oscar Wright, the Superintendent of Mines Rescue, described above.¹

Several further questions arise from that case:

- (i) If a breach of the Regulations similar to that admitted by Mr Wright is to be generally condoned, will more widespread sympathetic attitudes towards all breaches of the Regulations become inevitable?
- (ii) To what extent could dilemmas such as that faced by Mr Wright be prevented by a more vigorous and open pursuit of breaches of the law on the part of both Her Majesty's and Workmen's Inspectors?
- (iii) Even if a more vigorous pursuit of breaches of the law did reduce the number of such cases, what effect would this have on the decisions of officials faced by a dilemma similar to that encountered by Mr Wright?
- (iv) Would a more vigorous pursuit of breaches of the law and the prosecution of those found breaching the law lead to improvements in the law?

Questions such as these are not generally discussed or debated within the industry (or in the journals of the professional institutions). On the other hand, questions which involve either the framing or the amending of Regulations, especially questions concerning mining technology, are discussed and thoroughly debated. One possible reason for this is that Mines Inspectors, as leaders of engineering professions,

1. See pp110-112 above.

might consider the problems of law enforcement less important than the problems of mining technology.

A professional tends to define a problem in terms of his own professional competence.¹ Solutions to the four questions asked above are by no means the prerogative of the mining engineer. (This is not to underestimate the experience and wisdom which individual Mines Inspectors have acquired during their years as colliery officials or inspectors). Nevertheless, the bureaucratic characteristics of the Mines Inspectorate (the conformity, 'the process of sanctification', attitudes of moral legitimacy, the defensive informal organisation) have been such that these questions have remained the prerogative of the mining engineer, while academic disciplines other than engineering, which could have provided valuable insights into such questions, have been ignored, as have the very questions themselves.

b) The role of the Inspectorate

Since the Mines and Quarries Inspectorate provided both the Commissioner of the Inquiry (a traditional appointment)² and the leading examiner of the majority of witnesses, this section will be devoted to a discussion of the Inspectorate's place in the coal mining industry.

1 A similar tendency is true of the academic world. "Whatever is a problem for one discipline becomes a given, an external factor, for the neighbouring discipline. For instance, economists assume political structures to be given. Likewise, sociologists assume economic structures to be given...Each discipline throws light on a set of variables precisely because other factors are assumed to be external, distal and equal." G. Sartori, "From the Sociology of Politics to Political Sociology", Government and Opposition, 4, 1969, p196. cit. in M. Rush and P. Althoff (1970).

2 But see the footnotes on p 74.

(i) The early Inspectorate

To understand the Houghton Main Public Inquiry it is necessary to understand the role of the Mines Inspectorate. Some of Tremenheere's views of this role are still quoted almost as guiding principles. For example, in a contribution to a paper to the Midland Institute of Mining Engineers Branch of the Institution of Mining Engineers, 2nd May 1974, W. J. Charlton summarised Sir Andrew Bryan's remarks about Tremenheere thus:

"...H. S. Tremenheere, the first Inspector of Mines, although not a mining engineer, set a pattern of relationship between inspectorate and management which has continued for almost a century and a half. ...Tremenheere would persuade rather than coerce owners and managers to change their methods in the interests of safety (and founded an inspectorate) whose objective was, without resort to prosecution, to bring the standard of the less well managed mines nearer to that of the best ..."¹

It is profitable to consider some of the background against which Tremenheere's philosophy was born.

Tremenheere was appointed Her Majesty's Inspector of Mines under the 1842 Mines Act, which empowered the Home Secretary to "appoint inspectors to examine and report upon collieries, the 'condition' of the miners and the operation of the Act."

The Act of 1842², moved by Lord Ashley, was designed to ameliorate the conditions described in the Report of the Royal Commission on the Employment of Children in Mines. The original Bill was read in the

1. The Mining Engineer, February 1975 p 203
 2. 5 and 6 Vic. c. 99. The Mines Act "to prohibit the Employment of Women and Girls in Mines and Collieries, to regulate the Employment of Boys and to make other Provisions relating to persons working therein.

House of Commons without dissent,¹ but during its passage through the House of Lords the Marquis of Londonderry emerged "as the champion of the Colliery proprietors",² and it became obvious that they, the colliery proprietors, would make a strong effort to prevent the Bill becoming law. Their lobbying was evident when the third Reading of the Bill took place in the House of Commons, "Mr Stansfeld, even going so far as to object to boys being made idle by Act of Parliament".³

The Act emerged dramatically amended. Even so,

"...this fragment of legislation met with the disapprobation of colliery owners... and the proposed inspection was characterised as a useless and mischievous prying into the affairs of private individuals."⁴

The general principle of the Act was opposed, Lord Radnor stating in the House of Lords:

"...women and children might be improperly or indecorously employed in the mines, but the condemnation of the system or even the desire to put an end to it, was not altogether a sufficient ground for passing an Act of Parliament to carry out such a desire."⁵

In September 1844 95 men and boys perished as the result of an explosion at Haswell Colliery in County Durham. The Miner's Association sent a petition to the Home Secretary asking that a Special Commission be appointed to inquire into the circumstances of the accident. The result was the first government inquiry into the causes and circumstances of a colliery disaster.

"The Government sent down Messrs. Lyell and Faraday (Sir Charles Lyell, the famous geologist, and Sir Michael Faraday FRS, the noted scientist) to enquire into the cause of the accident and report. The appointment of the two Professors produced almost as great

1 Hansard LXIII 6th May 1842

2 R. Nelson Boyd (1879) p52

3 Ibid, p53

4 Ibid, p57

5 Ibid, p58

6 Ibid, p71

a sensation among colliery owners and viewers as (did) the accident itself.

...As soon as the opinions of the Professors became known they were criticised in pamphlets and newspaper articles in a tone more or less adverse to scientific suggestion in a matter so practical as coal mining.¹

One suggestion was that cast iron tubes should drain methane from the waste (or goaf) to the upcast shaft. This suggestion was condemned by the coal owners of the north as being 'ridiculous' and 'impracticable'. (It is only since the 1950's that methane drainage has been standard practice in many collieries). Another suggestion of the Haswell Report was that the standard of education of the miners in general, and those set over them in particular, be raised, since this would be more conducive to safety, they thought, than any Act of Parliament.

That a qualified inspectorate be appointed was proposed in 1842, by the South Shields Committee, a committee of local gentlemen which had been formed in August 1839, after colliery explosions at Wallsend (1835), Springwell (1837) and St Hilda's (1839).

They recommended proper government inspection "by well informed scientific and practical inspectors"².

In a British Association for the Advancement of Science publication of 1845, Professor Anstead stated that he

"...considered that no great improvements in the working of collieries would ever be effected without some kind of Government interference."³

After the Round Green Colliery disaster of 23rd November 1846, a meeting of the Dudley Trade Union sent a memorial to the Secretary of State "praying" the Government to appoint underground inspectors.⁴

1 Ibid, p71
 2 Report of the South Shields Committee (1843)
 3 R. Nelson Boyd (1879) p 72
 4 Ibid, p79

Although Tremenheere regarded the examination of the social problems of the mining districts as his main function, he contributed "as much as any single person to the first form of the second mining inspectorate".¹ After the explosions at Aberdare and at Risca (Monmouth) in late 1846, and after seeking the opinions of mining engineers, Tremenheere wrote to the Home Secretary informing him that "the inspection of the mode of ventilation in each colliery, by a properly qualified Government Officer, without powers of interference, would greatly diminish the risk."²

In May 1847 the Miners Association of Great Britain presented a petition to the House of Commons, in which they urged

"...that inspectors should be appointed to visit all the mines, and that some of these inspectors should be acquainted with colliery work; that such inspectors should see that accurate maps are made of all workings of the mines, that these inspectors should grant licences to mines when they consider that due provision and care has been used to prevent accidents and ensure good ventilation; and without such licence no mine should be permitted to work."³

Professor MacDonagh expresses the view that in part the trade unions pressed for an inspectorate "in the idiom of class conflict".

"Although the sense of 'hardly suppressed violence in the background' was certainly a goad to action. (MacDonagh writes), on balance union support may have been a liability on the issue because of the feelings in the 1840's that there should be no concessions to organised labour lest its appetite should grow with feeding."⁴

(ii) Then and now

Despite the opposition of the coal owners, in 1850 " An Act for

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1. O. O. G. M. MacDonagh (1967) p 64
 2. Ibid, p 64 Letter from Tremenheere to Grey 31st December 1846
 3. R. Nelson Boyd (1879) p 82
 4. O. O. G. M. MacDonagh (1967) p 68

the Inspection of Coal Mines in Great Britain,"¹ was passed and the Home Secretary appointed as inspectors four technically qualified and established mining engineers. These four inspectors were responsible for two thousand collieries. By contrast, in 1972, 131 inspectors supervised only 289 collieries.

By the 1850's private ownership of mineral rights had enabled the coal industry to develop vigorously, albeit in a piecemeal fashion. Seams were worked in a variety of ways according to local customs and conditions, while there was no general agreement about what was "good" mining practice nor any professional mining institution where ideas and experiences might be exchanged. As yet there were no mining departments of universities to search for scientific bases for mining practice.² Under these circumstances it was impossible to produce comprehensive legislation acceptable throughout the industry.

Without general agreement upon what constituted "good mining practice" or comprehensive legislation it was extremely difficult to use the courts of law to compel owners and managers to change their methods in the interests of safety. The only course open to the Inspectorate was to try to persuade owners and managers to bring the standard of the less well-managed mines nearer to that of the best.

In the 1850's the coal owners, wealthy, powerful and well represented in Parliament, regarded government interference as anathema. Today senior mining engineers of the National Coal Board regard Her Majesty's Inspectorate not as an organ of government interference but very much as an integral part of the industry.

1. 13 and 14 Vict., c. 100

2. Although, as previously stated, the Royal School of Mines was founded in 1851.

Whereas the Inspectorate of 1850 had but little authority, the "powers conferred on Inspectors by the Mines and Quarries Act are exceptional..."¹ and Her Majesty's Inspectors of Mines are extremely proud of their

"considerable success... in their role as advisers, a success in no small measure due to the recruitment and selection of Inspectors who are readily acceptable to the industry because of their education and training, practical experience, professional qualifications and personal qualities."²

Sir Andrew Bryan has authoritatively traced the role of the Mines Inspectorate, from its formation until the present day,³ and shows that the pattern of relationship between Inspectorate and management set by Tremenheere⁴ continues.

There is a great deal of evidence that the Inspectorate is readily acceptable to the industry. Typical of the attitude towards the Inspectorate in the Barnsley Area was that voiced by the National Union of Mineworkers' Mining Engineer, speaking of the Senior District Inspector:

"He is a very nice chap, and does a fantastic amount of work; I am full of admiration for him."⁵

At the Seafield Inquiry an ex-Chief Inspector of Mines (Sir Andrew Bryan) was chosen to represent the British Association of Colliery Management. Many Inspectors play an active part in, and are elected to, important posts in their professional institutions.

"Inspectors frequently take part as organisers, judges or prize distributors in first aid and rescue team competitions and the like."⁶

1 Robens Committee of Inquiry on Safety and Health at Work Report of the Committee, 1972, Vol.2 p37

2 Sir Andrew Bryan (1975) p95

3 *ibid*, *passim*

4 See p120 above

5 Personal Interview with Mr Arthur Owens at the time of the Inquiry.

6 Sir Andrew Bryan (1975) p96

When asked about the need for training of new entrants to the Mines Inspectorate, the Deputy Chief Inspector of Mines and Quarries,¹ Mr L.D. Rhydderch replied that training needs were minimal, because:

"we can recruit from people whom we already know, and we can judge whether a person will fit into the job."²

If mining engineers were even to suspect that there is this kind of informal vetting as to the suitability of potential recruits to the Inspectorate, they would, not unnaturally, feel inhibited from criticising the manner in which the Inspectorate performs its duties. In the United Kingdom there are few posts available for mining engineers outside the National Coal Board, a fact which helps shield the Inspectorate from possible criticism.³

1 Now Chief Inspector of Mines and Quarries.

2 Personal interview at the time of the Inquiry

3 One Colliery General Manager (who has since left the National Coal Board) told me in a private conversation that such a suspicion certainly influenced his behaviour towards the Inspectorate.

CHAPTER XIITHE PROCEDURE OF THE INQUIRY

The Houghton Main Public Inquiry was established in pursuance of Section 14 of the 1974 Health and Safety at Work Act, and of the 1975 Health and Safety Inquiries (Procedure) Regulations.¹ It was the first to be held under the Act and Regulations.

The Health and Safety at Work Act of 1974 effected the main recommendations of the Committee on Safety and Health at Work - the Robens Committee.² The Act established both the Health and Safety Commission and the Health and Safety Executive for administering the legislation and providing a focus and centre of initiative for health and safety at work. The Health and Safety Executive came into operation on January 1st 1975, on which date the Mines and Quarries Inspectorate, the Nuclear Installations Inspectorate, the Explosives Inspectorate, the Alkali Inspectorate, the Factory Inspectorate and the Safety in Mines Research Establishment all became part of the Executive.

Prior to the Houghton Main Inquiry all public inquiries into mining accidents had been governed by the First Schedule of the Mines and Quarries Act of 1954. At the time of the accident (12th June 1975) the legal position concerning the conduct of public inquiries was confused, since the First Schedule of the Mines and Quarries Act 1954 was still in force. (It was not repealed until 4th August 1975),

1 Statutory Instruments 1975 No. 335

2 Cmnd 5034

In fact, the Regulations repealing the Act¹ were not made until 30th June 1975, and were not laid before Parliament until 15th July 1975.

The Public Inquiry into the Seafield Colliery Accident, which began proceedings on 8th August 1973, was nearly identical in procedure to the Houghton Main Inquiry, a fact which indicates that thus far the legal changes had had little effect on procedures.

SIMILARITIES IN PROCEDURE

(a) Her Majesty's Chief Inspector of Mines and Quarries was appointed Commissioner of each Inquiry. At the Seafield Inquiry the Commissioner was the late Mr. J.W. Calder, C.B., O.B.E., and at the Houghton Main Inquiry, Mr. J. Carver.

(b) The Secretary of State for Trade and Industry directed the Commissioner to hold the Seafield Inquiry, the Chairman of the Health and Safety Commission (with the consent of the Secretary of State) directing that the Houghton Main Inquiry should take place.

(c) Both Commissioners used identical wording for their opening remarks, viz.

"My first thoughts must be directed to the importance of ascertaining all the facts which might have a bearing on the accident, and in this connection I would ask you to give publicity to this request. If there is anyone listening to or reading reports of the evidence and proceedings of this Inquiry who has not been called to give evidence, but who feels that he has something to offer, I invite him to come forward and to do this through either the representatives of the interested parties or any of the officials of the court".

¹ The Mines and Quarries Act 1954 to 1971 (Repeals and Modifications) Regulations 1975

Other opening remarks made by the Commissioner of the Houghton Main Inquiry are given below, with any variations from those of the Seafield Inquiry being indicated in brackets:

"...on the question of evidence which is to be presented to the court Mr. Nicholas of the Health and Safety Executive (Mr. Thomas of the Department of Trade and Industry) and representatives of the interested parties have taken statements from most of the witnesses. You will realise, however, that these statements are not evidence and ("when I come to write my report" is inserted at this point) I shall consider only the evidence produced to me here, although I hope that the statements which have been taken will help to facilitate the presentation of the evidence of the Court. I have, as a result of representations, called a number of witnesses, but should it occur to you at any time that someone else might be able to give valuable evidence, I should be very glad to discuss this with you. In doing so, would you remember particularly that if it is to be fresh evidence, the Court would like to have 24 hours notice of the evidence to be produced. In this regard you should make representations to me through Miss Wall or Mr. Baxter (Mr. Bell and Mr. Nicholas). The next matter to which I want to refer is the examination of witnesses. The court has some of the powers of a Court of Summary Jurisdiction, but there is one very important difference compared with the proceedings of such a court, and that is that no-one is being brought here charged with an offence. It follows, therefore that this is not a case of examination and cross examination but rather examination and further examination of people who have come here voluntarily to give evidence and help. I am sure I do not need to tell you that your questions must be directed to ascertaining the facts, and so it is very undesirable for you to seek an opinion from a witness where it is clearly not within his province to express one. Equally, it is not desirable that you yourself should express opinions of your own during the course of the examination. When the examination of all the witnesses has been completed, I shall be giving you adequate time to assess the facts as you see them and to express whatever opinions you may hold. Of course, I do not wish to place any unnecessary restrictions on you but it must be obvious in view of the considerable number of witnesses to be called that I cannot admit a witness to be examined by more than one member of any interested party. That is to say, I will permit witness A to be examined by Mr. X on behalf of an interested party and witness B to be examined by Mr. Y., but I cannot permit witness A or B to be examined by both Mr. X and Mr. Y. By the same token I must ask you to avoid as far as possible the re-examination of witnesses. In other

words, when it comes to your turn to examine a witness you should try to obtain all the information you need in one examination. I propose that the examination of each witness will be begun by a representative of the Health and Safety Executive, followed by representatives of the National Union of Mineworkers. There will then be the National Association of Colliery Overmen, Deputies and Shotfirers, the National Coal Board and the British Association of Colliery Management in that order. If, however, any additional witness is called he will be examined first by the representative of the party who asked for him to be called and then by the others in the order that I have just mentioned.

Finally, I am confident that I shall have your fullest co-operation in the conduct of this Inquiry and that you will direct all your efforts to helping me to find the cause of the Houghton Main Accident (Seafield disaster)".

Unless otherwise provided for in the Regulations, the procedure at the Inquiry was at the discretion of the Commissioner. Regulation 8(5) of the Health and Safety Inquiries (Procedure) Regulations of 1975¹ states:

"Persons entitled to appear shall be entitled to make an opening statement, to call evidence and to cross-examine persons giving evidence, but any other person appearing at the inquiry may do so only to the extent permitted by the appointed person".

It appears that the opening remarks that "...this is not a case of examination and cross examination but rather examination and further examination..." needs revising in the light of Regulation 8(5).

Although "the interested parties were consulted at every stage in the arrangements regarding who should be called and how the Inquiry should be conducted", it would seem that precedent played a large part in the conduct of the Inquiry, and, in fact, one of the National Union of Mineworkers team said that the basis on which he personally

1 Statutory Instruments 1975 No.335

accepted the suggested arrangements was that "that was how previous inquiries were carried out".

APPEARANCES AND REPRESENTATION

The term "representatives of interested parties" is not used in Section 14 of the Health and Safety at Work Act or in the Health and Safety Inquiries (Procedures) Regulations 1975. However, according to Section 5(1) of these Regulations, the persons entitled to appear at the inquiry shall be:

- (a) the Commission;
- (b) any enforcing authority concerned;
- (c) where the inquiry relates to any matter arising in Scotland, the Procurator Fiscal;
- (d) any employers' association or trade union representing respectively employers or employees who are concerned;
- (e) any person who was injured or suffered damage as a result of the accident, occurrence, situation, or other matter the subject of the inquiry or his personal representatives;
- (f) the owner or occupier of any premises in which there occurred or arose the accident, occurrence, situation or other matter the subject of the inquiry;
- (g) any person carrying on activities giving rise to the accident, occurrence, situation or other matter the subject of the inquiry.

Section 5(2) of these same Regulations states "that any other person may appear at the discretion of the appointed person" (i.e. the Commissioner).

Section 6 states how these persons might be represented:

- 6 (1) A body corporate may appear by its clerk or secretary or by any other officer appointed for the purpose, or by counsel or solicitor, and also, the case of the Commission, by an officer of the Executive so appointed.
- (2) A government department, an employers' association or trade union may appear by counsel or solicitor or by any other person appointed for the purpose.
- (3) Any other person may appear on his own behalf or be represented by counsel or solicitor or any other person.
- (4) Where there are two or more persons having a similar interest in the matter under inquiry, the appointed person may allow one or more persons to appear for the benefit of some or all persons so interested.

Although there was thus legal provision, no individual was represented. There were, however, representatives of the Health and Safety Executive (a government department), of the National Coal Board and of Carter Howden Limited (bodies corporate), as well as of the National Union of Mineworkers and the National Association of Colliery Overmen, Deputies and Shotfirers (trade unions). The British Association of Colliery Management and the National Association of Colliery Managers Ltd. were jointly represented.

Prior to the Inquiry, Mr. Nicholas, the Senior District Inspector for the Area in which Houghton Main Colliery is situated, obtained many statements and informed the other interested parties of the content of these statements. During the Inquiry, the majority

of witnesses were called by Mr. Nicholas, who established information which was not in dispute. Mr. Scargill, representing the National Union of Mineworkers, followed Mr. Nicholas and was in turn followed (normally) by Messrs. Fellows, Forrest and Brass¹, who made attempts to refute any evidence obtained by Mr. Scargill which they felt might be damaging to the interests which they represented. The representative of Carter Howden very occasionally questioned witnesses. Two witnesses were called by Mr. Scargill and examined initially by him; similarly two witnesses were called by Mr. Forrest and examined initially by him.

The final witness was Mr. A.R. Baker, Senior Principal Scientific Officer, Safety in Mines Research Establishment, who gave a "very comprehensive and thoughtful analysis of the evidence laid before the court".² So comprehensive, in fact, was Mr. Baker's analysis that Mr. Forrest asked for an adjournment, so that he could study the transcript of Mr. Baker's evidence before examining him. Mr. Forrest contended that it would have been perfectly easy for Mr. Baker to have submitted a proof of evidence similar to those provided by the two scientists whom he (Mr. Forrest) had called. He obviously felt that he needed more time to assess Mr. Baker's interpretation of the evidence. Despite the "strongest possible protest" from Mr. Forrest, his call for an adjournment was refused, the Commissioner remarking

1 Representatives of (i) the National Association of Colliery Overmen, Deputies and Shotfirers, (ii) the National Coal Board and (iii) the British Association of Colliery Management and the National Association of Colliery Managers Limited, respectively.

2 Mr. Nicholas, in examining Mr. A.R. Baker, on day eight of the Inquiry.

that

"...we have followed the procedure adopted at previous public inquiries where scientists from S.M.R.E. have submitted the evidence. We have done nothing here which is contrary to that practice".¹

The final part of the Public Inquiry consisted of submissions or statements from representatives named above, except for Carter Howden Limited which made no submission.

The Commissioner's closing remarks were:

"From my own experience of the industry I know only too well the impact an explosion of this kind can have on a mining community. I shall be grateful if you will convey my personal sympathy to the injured man and to the relatives and friends of the five men killed in this disaster".

In the Seafield Colliery Public Inquiry exactly the same words were used by the Commissioner, except "a disaster" was used instead of "an explosion" and "injured" was used instead of "injured man". This similarity of the wording, together with the above-mentioned similarity of the opening remarks, demonstrates the general conservatism of the Inspectorate in regard to the holding of public inquiries, a conservatism exemplified in the quoted reply to Mr. Forrest's request for an adjournment.

Whereas conservatism in itself is no bad thing, it does have a tendency to breed complacency. Both can foster an unwarranted feeling of self-sufficiency. Parochiality and complacency, traits less than desirable in the individual, constitute greater cause for concern when discernible in organisations as important as is the mining industry. Consider, for example, the following critique of the industry as it was during the 1850's:

¹ Author's underscoring.

"...A belief prevailed very generally that only those who had from early days been accustomed to pit work could ever thoroughly master the intricacies of underground workings, a mistaken opinion arising out of the exclusive life of all engaged in colliery working, from the viewer or manager down to the trapper".¹

There is evidence that this belief still exists. For example, one of the National Coal Board witnesses at the Houghton Main Inquiry was (and is) an eminent chemical engineer, a world authority on combustion, fire and explosion. As soon as the Senior District Inspector established that he, the witness, had been underground only a few times, one felt that his credibility as "an expert" diminished. The witness himself remarked afterwards that he had felt an immediate change of attitude throughout the courtroom.²

In this particular instance, I believe that the number of times the witness had been underground had little relevance to his capacity to give evidence. This is not to say that I agree wholeheartedly with this witness's evidence, but I feel the attempt to undermine his credibility was unworthy.

Another National Coal Board witness, also a scientist, was being questioned as to his opinion regarding the explosion. Quoting other eminent scientists and experts on explosions, he remarked that

"...the way an explosion wave behaves in a mine gallery or roadway is no different from the way an explosion takes place under controlled conditions - say, in an

1 R. Nelson Boyd (1879) p106

2 Conversation with Professor J.H. Burgoyne, Consulting Engineer, on the afternoon he gave evidence, on the eighth day of the Inquiry.

underground sewer pipe of comparable diameter".¹

Mr. Nicholas, examining this witness, seemed quite annoyed at the above statement, retorting that

"We are not concerned with underground sewer pipes at this Inquiry, but with Houghton Main Colliery and with Coal Mines..."

The Senior District Inspector's questioning of this second expert witness could be said to have demonstrated his own parochial attitudes, and it certainly reflected his awareness of the parochial attitudes of the industry in general.

The parochiality of the mining industry is further evidenced by the opposition it (the industry) showed to the idea of a unified inspectorate, when that idea was first expressed in 1975.²

Although the Mines Inspectorate can point to improvements in accident rates and in industrial disease rates over the years, this improvement may be due to factors other than its own "quality"³, a possibility which some members of the Inspectorate readily admit.

The relation between the work of an inspectorate and the safety and health of workers in its domain is difficult to measure, but it is nevertheless essential that an attempt be made to identify any such relation and that reasons for the relation be sought. Not only is this one of the few rational ways in which an Inspectorate is able to improve its own effectiveness, it is a way by which other

1 Evidence of Dr. E.A.C. Chamberlain, Director of Scientific Control, National Coal Board, on the eighth day of the Inquiry, Wednesday, 3rd September 1975.

2 See pp27-28, above

3 Sir Andrew Bryan (1975) gives a comprehensive account of these factors, p96.

inspectorates can gain knowledge in order to plan their own work and thus improve their "quality". (This is not to say that all inspectorates should be identical). Thorough examination of a particular accident provides one way of identifying relations. However, during the nine days which the Inquiry sat, there was little examination of the relation between the Mines Inspectorate and Houghton Main Colliery prior to the accident and no member of the local Inspectorate was called as a witness.

On the fifth day of the Inquiry, in his attempt to establish that the ventilation of part of the mine was satisfactory, Mr. Forrest referred to an inspector's visit to Houghton Main Colliery.

"MR. FORREST: Do you happen to know whether...any of Her Majesty's Inspectors of Mines and Quarries questioned the ventilation on E 21s, which you have said yourself were satisfactory?

MR. W. LAW (Colliery Ventilation Officer): They have not questioned it. No.

MR. FORREST: Not to you?

MR. LAW: Not to me, no.

MR. FORREST: So that if they paid a visit to the mine they must have thought it was alright. I see Mr. Nicholas rising to his feet, I do not know whether he is going to object.

MR. NICHOLAS: I have just decided to stretch myself, Sir.

MR. FORREST: I think it is a perfectly proper question. The witness has already said it was satisfactory and I understand that one of her Majesty's Inspectors has been there and I do not think E 21's ventilation has ever been in doubt.

MR. LAW: No. ¹

Despite Mr. Forrest's assurance, one gains the distinct impression that both he and Mr. Nicholas were unsure whether this line of questioning was in fact "proper", in that the National Coal Board seemed to be exceeding its brief in implying that the local

¹ Proceedings, fifth day of Inquiry

Inspectorate could have been partially responsible for any possible fault on E 21's ventilation.

There was further mention of this visit on the seventh day of the Inquiry, when Mr. Fellows was questioning Mr. Fox, the Colliery Deputy Manager. This questioning produced the only evidence of the Inspectors' contribution to health and safety at the Colliery before the accident.

"MR. FELLOWS: Can you recall at any time the visit of one of Her Majesty's Inspectors to E 21's?

MR. FOX: Yes

...

MR. FELLOWS: Can you tell me what his views were and whether he had any adverse comments to make on E 21's?

MR. FOX: At a certain point on the loader gate there was a plate in front of a transformer which needed to be removed. The transformer needed lifting and levelling which was done before leaving the district. A piece of cable needed lifting and we took samples along the face. It was through the Inspector's visit that we did this resin injection at the tail gate, and we came off the tail gate and out of the pit.

MR. FELLOWS: Did he at any time make reference to the system of ventilation in E 21's?

MR. FOX: No.

The failure to consider more fully the relation between H.M. District Inspectors and the Colliery might indicate a certain complacency within the industry as a whole, in that there was no effort to find ways of improving the effectiveness of the Inspectorate in preventing the explosion. It might, on the other hand, be a reflection of the power held by the Inspectorate in relation to the other 'interested parties' at the Inquiry.

In order to better discharge their duties as examiners, the five principal representatives of the "interested parties" co-operated in preparing their "cases". However, all relied to a large extent upon

the helpful co-operation of the Senior District Inspector, who, prior to the Inquiry, had taken many statements, the contents of which he had revealed to his fellow examiners. His co-ordinating role put him in a powerful position during the planning of the conduct of the Inquiry.

During the Inquiry itself the manner and extent of the Senior District Inspector's examination of a witness could greatly influence the effectiveness of Mr. Scargill's subsequent examination. Mr. Scargill, one of the least conservative participants in the Inquiry, was the only examiner to express doubts about the role of the Inquiry, as it was defined by the Commissioner.

On the fourth day of the Inquiry, Mr. Nicholas explained to the Commissioner that he did not propose to pursue the question of "locking out" electrical equipment with Mr. Williams, the Deputy Electrical Engineer, because he (Mr. Nicholas) was going to question another witness who, in his view, was very competent to deal with the technicalities of "locking out". When the Commissioner thanked Mr. Nicholas for this explanation, adding "I hope the other interested parties will do likewise", Mr. Scargill interrupted, saying:

MR. SCARGILL: I am a bit taken aback. I would have thought questions of this nature which have a direct bearing on the line of communication and management techniques ought really to be put to the person in the responsible position of deputy electrical engineer.

THE COMMISSIONER: I think, Mr. Scargill, we can get all the information that we require on this question from the next witness, as Mr. Nicholas proposes to do.

MR. SCARGILL: I do not want to labour the point, Mr. Commissioner. Each witness has his own contribution to make, and I believe this is one of the reasons that they are before this Inquiry. I would have liked to pursue this point, not at considerable length but a little with the witness.

THE COMMISSIONER: Mr. Scargill, I think the question will be adequately dealt with by the next witness. I think that you can rely on Mr. Nicholas to do the job thoroughly with the next witness. It is me you have to convince, you know, and I think this can be done by interrogating the next witness, and I would be obliged if you would resist the temptation to ask these questions as Mr. Nicholas has done.

MR. SCARGILL: I understand what you have said, Mr. Commissioner, but this is a public inquiry and I am representing a union and asking questions on the basis of information we have collected over a period..."¹

It would appear that although the Commissioner and Mr. Scargill were both concerned with the causes and circumstances attending the explosion, the Commissioner's priority was to obtain technical information from the most authoritative source(s), in order that he might better understand the causes of the explosion and/or find technical means of preventing further explosion(s). Mr. Scargill on the other hand, was particularly interested in the extent of the technical knowledge and in the competence of those officials responsible for the mine at the time of the explosion.

In other words, Mr. Scargill saw the "circumstances of the accident" as of more importance than did the Commissioner. I would be unwilling (and unable) to assign motives to Mr. Scargill. What was clear in the public gallery was that his union members were obviously delighted whenever he seemed to expose inadequacies in management officials. A possible explanation is that, at this point in the Inquiry, Mr. Scargill was attempting to highlight management's technical and administrative inadequacies, rather than pursuing a causal model of the accident.

Before the Inquiry sat, the Safety in Mines Research Establishment carried out various physical scientific tests and one of their scientists (Mr. Baker) summarised the physical scientific evidence presented to the Inquiry. In contrast, no test was carried out by

¹ Proceedings, during examination of Mr. D.A. Williams, Friday 29 August 1975.

social scientists prior to the Inquiry and no summary of the social scientific evidence was made. No summary, for example, was made of the Inquiry's attempts either to demonstrate the quality and quantity of the knowledge of junior officials or to prove/disprove the National Coal Board's contention that officials were well trained and had attended various courses. The knowledge of junior officials at the Colliery, and the effectiveness of their training in such tasks as writing pre-shift reports, could have been better examined by properly-planned tests prior to the Inquiry. Similar tests could have been carried out at other collieries in other mining districts, in order to see whether any significant differences existed either between officials or between Houghton Main Colliery and other collieries. The results could then have been submitted as evidence.

It would seem, like the Commissioner, that the Safety in Mines Research Establishment was mainly directed towards the immediate causes of the explosion, and that the social scientific evidence, which might have provided an explanation of the circumstances of the explosion, was neglected.¹

¹ See Appendix 1 for the titles of the Safety in Mines Research Establishment Reports.

CHAPTER XIIITHE INEQUITABLE REPRESENTATION OF INDIVIDUALS AT THE INQUIRY.Individuals felt their public reputations were at stake

One serious defect of the Inquiry was the inequitable representation of the interests of individuals. Whatever the expressed intention of the Inquiry, there is no doubt that some individual witnesses felt that they were on trial and that their public reputations were at stake.

An indication of the manner in which some witnesses felt threatened during their evidence to the Inquiry can be seen by contrasting the manner in which (a) members of the rescue teams and (b) witnesses from Houghton Main Colliery answered questions. Nearly one thousand questions were directed to the rescue teams involved, and in answer to only one of those questions was the examiner called "Sir". By contrast, of the 8099 questions directed to Houghton Main Colliery personnel, 319 answers contained "Sir".

This highly significant proportional difference (approximately 40 per thousand, compared with 1 per thousand) cannot fully be explained by job differences. Many rescue personnel had jobs similar to the Houghton Main witnesses and some of the Houghton Main witnesses were trained rescue workers. I suggest that the difference in behaviour can be accounted for by the situation in which the Colliery witnesses found themselves, i.e. a situation in which they felt the need to show deference.

A prime example of this type of situation was provided during the examination of Mr. Charles Wilkinson, a 55 year old transfer point attendant at Houghton Main, whose duties included starting and stopping the belt at a main gate end, answering the telephone, and generally cleaning up. In answer to a question by Mr. Nicholas, the fiftieth question which he was asked by that examiner, Mr. Wilkinson admitted that just prior to the explosion he had ridden to the pit bottom on an unauthorised belt. (Only conveyer belts specially designed and designated by the Colliery Manager can be used for man riding). It is worth noting that only when he was asked to explain how he had managed to get "beyond 60's" so quickly did Mr. Wilkinson admit that he had ridden off on an unauthorised belt. Of even greater significance is the fact that only in declaring this misdemeanour (a declaration greeted by smiles around the chamber) did Mr. Wilkinson address the examiner as "Sir".

A further analysis of the proportion of answers containing "Sir" for Houghton Main personnel is given in Appendix II, but I feel that the results of the analysis add to the understanding of the Inquiry and should be included in the text.

The highest proportion of answers containing "Sir" were in reply to questions from Mr. Brass and Mr. Nicholas. Mr. Brass is a member of a family long associated with Houghton Main Colliery, and the older miners whom I interviewed spoke of him with a mixture of pride and respect. It is to be expected that through "custom and practice" he would be more likely to be called "Sir" by Houghton Main personnel. On the other hand, Mr. Nicholas, the Senior District Inspector, was no more well known to Houghton Main personnel than to others in his Area. The relatively higher proportion of "Sir" answers (compared

with Messrs. Scargill, Fellows and Forrest) could be explained in terms of the cumulative effect of several factors. It could be considered that this was a customary or "correct" way to address H.M. Senior District Inspector of Mines and Quarries. Most witnesses had already given statements to Mr. Nicholas and as a result he could very well have gained further personal respect. Moreover, witnesses were probably more apprehensive in answering questions from Mr. Nicholas, since he was the first examiner.

Mr. Scargill is a well known personality, especially in the Barnsley Area, where he is generally known among the miners as "King Arthur". My assumption is that, despite his regal nickname, he is not generally addressed as "Sir". I had no opportunity to check my assumption by observing his relationships with people outside the Inquiry. In asking how individuals would address him I received a high proportion of answers which joked about his nickname. I was surprised at the number of witnesses who did call Mr. Scargill "Sir".

Mr. Fellows is well known at Houghton Main Colliery, where he was once a junior official. It is also my assumption, based upon rather weak hearsay evidence, that outside the Inquiry he would not usually be called "Sir" by Houghton Main personnel. In fact, one witness called Mr. Fellows by his Christian name during examination.

Mr. Forrest, although nationally well known to mining engineers, was not personally known to most witnesses.

To summarise, the significantly higher proportion of "Sirs" given in answer to questions from Messrs. Brass and Nicholas can be

attributed to "custom and practice", while the highly significant proportion of "Sirs" given in answer to the five examiners by Houghton Main Colliery personnel can be accounted for by the defensive situation in which witnesses found themselves.

However, the above explanation may be regarded as tentative and speculative, but the following account gives additional evidence that at least one individual felt his reputation to be at stake.

On the sixth day of the Inquiry Mr. Irvin Martin, a Houghton Main Colliery Seam Overman, was examined and was given permission to stand down. A previous witness, Mr. Kenneth Adams, Shift Charge Mechanical Engineer, had claimed, on the third day of the Inquiry, that he had told Mr. Martin that a fan on B05's heading was defective, a claim which Mr. Martin felt he had to refute before standing down.

"MR. MARTIN: In view of the accusations that this bloke (Adams) has made, might I be allowed to tell the court what else he has done?"

THE COMMISSIONER: What do you mean?

MR. MARTIN: He accused another chap of this and admitted he had made a mistake and could not fasten it on him.

THE COMMISSIONER: Would you repeat that?

MR. MARTIN: I can tell you what happened. The shift charge man/electrical engineer, who is a bit wet behind the ears and has only just started...

THE COMMISSIONER: Be careful about your phraseology.

MR. MARTIN: He said to this lad, "I told you about this fan". This was said to Brian Watson. He had only been assistant electrical engineer a few weeks, and the kid said, "I cannot remember that". He said, "Oh yes, I told you", so he got this kid worried. He did not know what to do and was ready to put his ears into the oven.

MR. FELLOWS: I am representing Mr. Martin. I do not think this is relevant to this Inquiry.

MR. MARTIN: I am concerned about my name".

Mr. Martin finished his story in the midst of interruptions

"...That lad could not have been told what he was supposed to have been told...He was supposed to have told him that night, but the lad was at the tech. and

he had not attended the pit".¹

In this case the witness, obviously a strong-minded overman, was able to put his view forward and thus shake off some of the shackles of the Inquiry. Though Mr. Fellows claimed that he was representing Mr. Martin, he had not thought it necessary to call witnesses to support Mr. Martin's evidence. Mr. Martin felt his reputation had been damaged by Mr. Adam's remarks and wished to "put his case" before the Inquiry, whether or not his representative considered it relevant. Unfortunately for Mr. Martin, the National Union of Mineworkers examiner, Mr. Scargill, agreed with Mr. Fellows that Mr. Martin's "case" was "not a matter of concern at this stage", a statement with which he, Mr. Martin, not unnaturally disagreed.

Mr. Martin's case provides evidence that the interests of an organisation are not necessarily those of an individual member of that organisation. A further example is that of Mr. C. Wright, a deputy, who was examined by Mr. Fellows, his union representative, as follows:

"...MR FELLOWS: Would I be right in saying that in terms of your responsibility as a deputy, if you found gas, whether or not you dilute it, it should be reported in your report?

MR. WRIGHT: Yes

MR. FELLOWS: Yet you have not done that?

MR. WRIGHT: No

MR. FELLOWS: Would I be right in saying that in your inspection of B05's you had knowledge that the fan was defective?

MR. WRIGHT: I had knowledge on the Tuesday

MR. FELLOWS: And also knowledge that a fence had been erected?

1 Proceedings: Sixth Day, Monday 1st September, 1975

MR. WRIGHT: Yes

MR. FELLOWS: As a deputy is it not your responsibility to report both the fan and the fencing?

MR. WRIGHT: I should have done

MR. FELLOWS: And you have not done?

MR. WRIGHT: No" 1

Mr. Fellows, President, Yorkshire Area, National Association of Colliery Overmen, Deputies and Shotfirers, seemed aggrieved² that a deputy, Mr. C. Wright, could, by his admitted irresponsibility, have so discredited the National Association of Colliery Overmen, Deputies and Shotfirers. As a result, Mr. Wright was certainly not represented in the way he might have thought payment of his union dues entitled him. Conflict between the interests of individuals and organisations is thus confirmed, as it was by Mr. Fellow's statement, on the seventh day of the Inquiry, that he did not condone the actions of three officials who had been before the Inquiry. In these cases the interests of the organisation took preference.

In contrast, some witnesses had their interests protected by two organisations, the questioning of the Colliery General Manager by the National Coal Board being an obvious case. His interests were defended extremely competently and the B.A.C.M./N.A.C.M's³ attitude was to congratulate him upon "how he stood up to his long inquisition" and then to give him the opportunity of making a statement.

1 Proceedings: Sixth Day, Monday 1st September 1975

2 That Mr. Fellows felt so aggrieved I put down to the fact that a member of his union had inadequately discharged his duties, duties defined by the Deputy's Regulations. Since these Regulations are used as a negotiating platform for the National Association of Colliery Overmen, Deputies and Shotfirers, Mr. C. Wright's admitted irresponsibility was bound to discredit any future claim that the responsibility of deputies entitles them to better remuneration.

3 The British Association of Colliery Management and the National Association of Colliery Managers Limited. Elsewhere in this thesis organisations are named in full, but to do so here would be cumbersome.

Many mining engineers are members of B.A.C.M./N.A.C.M. In the Seafield Inquiry B.A.C.M. was represented by Sir Andrew Bryan, a former Chief Inspector of Mines. In the Houghton Main Inquiry B.A.C.M./N.A.C.M. were represented by Mr. John Brass, the distinguished and respected mining engineer. The National Coal Board was represented at the Inquiry by another leading mining engineer, Mr. Forrest, a past President of the Midland Institute of Mining Engineers. During the hearing, notes were frequently passed between the National Coal Board team and the B.A.C.M./N.A.C.M. team, my inference being that there was a great deal of informal co-operation between the two groups. This co-operation no doubt helped B.A.C.M./N.A.C.M. to concentrate fully upon representing the individual interests of their members, though probably more important in this respect was the prestige with which B.A.C.M./N.A.C.M. is regarded throughout the industry. In other words, there was no need for B.A.C.M./N.A.C.M. to use the Inquiry as a platform for projecting an image.

The National Association of Colliery Overmen, Deputies and Shot-firers, however, is a union of junior officials. All line managers are expected to start their careers at the junior official level, but there is little evidence that during their time as junior officials they take any active part in union business. In any case, only a minority of the union are professional mining engineers.

The one prerequisite of membership of the National Association of Colliery Overmen, Deputies and Shotfirers is that the member possesses at least a deputy's certificate. The deputy has been called "the

N.C.O. of the front line of production"¹, a metaphor which facilitates understanding of the hierarchy within the mining industry. One cannot carry the metaphor too far, but it is apt in that it illustrates the division of ranks between professional engineer (officer) and junior official ("N.C.O.") My impression is that Mr. Fellows was very conscious of this division of ranks and of the comparative lack of prestige with which his union is viewed, and that, as Union President, he felt it his duty to use the Public Inquiry as a platform for projecting the most favourable image, even at the expense of individuals within his union.

The National Union of Mineworkers, in contrast to both B.A.C.M./N.A.C.M. and N.A.C.O.Ds, is entirely outside the "officer/N.C.O. hierarchy". In my view, the National Union of Mineworkers was less interested in increasing its own prestige or that of its members and more interested in reducing the prestige which (generally) attaches to management.² That this attitude posed a threat to officials of the National Coal Board was a factor which made the Inquiry more rigid and bureaucratic.

In contrast, Mr. Charles Wilkinson felt able to admit that he had ridden to the pit bottom on an unauthorised belt³ because, correctly, he assumed that his ride, though in breach of regulations, would be met with understanding by the Inquiry, in that it was "custom and practice".

1 Mr. H. Neal, M.P. for Bolsover. Official Report of Standing Committee A on Mines and Quarries Bill, Parliamentary Debates, H.C. 4th March 1954, Col. 241.

2 See p140 above.

3 See p143 above

He felt able to help the Inquiry to further ascertain the circumstances of the accident without being subject to the constraints (of self-incrimination) which one would normally expect in a court of law.

In this one instance the Inquiry demonstrated a less rigid and a less bureaucratic approach.

Conclusion

The disadvantage of an Inquiry in which groups are represented by "interested parties" is that, on occasion, a member of the group may find his individual interest(s) subordinate to that (those) of the group. Members of any group must expect this, but especially careful supervision is needed in a quasi-judicial setting, lest the interest(s) of the group impinge upon the individual's basic human rights. According to Section 6(3) of The Health and Safety Inquiries (Procedures) Regulations of 1975 an individual can be represented by whomsoever he chooses, though in practice this is not a real option.

"...MR. FOREST: Let us talk about the man in the union.

Is you get on well with the man in the union?

MR. FOX: Very well.

MR. FOREST: And do you discuss safety matters and planning with the union?

MR. FOX: We do.

MR. FOREST: ...Do you go underground on the 123 inspections with the safety inspector?

MR. FOX: No. The undermanager takes him, but I go forward with the members of the safety sub-committee."

Serious irregularities were revealed in respect of inquiries.

1. Proceedings, seventh day of the Inquiry, Tuesday 2nd September, 1976.

CHAPTER XIV

DO WORKMEN'S INSPECTORS HAVE A ROLE
TO PLAY IN THE PREVENTION OF ACCIDENTS?

Section 123 of the Mines and Quarries Act of 1954 enables workmen's inspectors to be appointed. They have powers to obtain information, to make inspections and to investigate accidents, and are appointed by the National Union of Mineworkers.

Other industries are interested in workmen's inspectors. An examination of their role prior to the accident at Houghton Main might indicate how they could more effectively prevent accidents in future, as well as their potential role in other industries.

The only relevant discussion in the Inquiry concerned not the role of the workmen's inspector but rather the role of Mr. L. Fox, Deputy Manager, in dealing with the workmen's inspectors.

"...MR. FORREST: Let us talk about the men in the union. Do you get on well with the men in the union?"

MR. FOX: Very well

MR. FORREST: And do you discuss safety matters and planning with the union?

MR. FOX: We do

MR. FORREST: ...Do you go underground on the 123 inspections with the safety inspector?

MR. FOX: No. The undermanager takes him, but I go forward with the members of the safety sub-committee..."¹

Serious irregularities were revealed in respect of deputies'

¹ Proceedings, seventh day of the Inquiry, Tuesday 2nd September, 1975.

statutory inspections and reports. Copies of the deputies' pre-shift reports have to be posted at the pithead, and it might be expected that such irregularities would have been apparent to the men, who in such cases could act as an additional control in maintaining the mining regulations. No workmen's inspector was called as witness during the Inquiry. One explanation of this might be that no "interested party" seriously believed workmen's inspectors were relevant to the prevention of accidents, or could be relevant in the future. Another possible explanation is that it was not in the interests of the "interested parties" or the organisations present at the Inquiry that a more thorough examination be made of the role of workmen's inspectors.

Mr. Scargill was very thorough in examining the technical knowledge and training of junior officials, but the National Union of Mineworkers might have felt, should their members be similarly examined and be found wanting, that this would reflect badly on the Union. Although more effective workmen's inspectors at the mines might benefit the industry as a whole, N.A.C.O.Ds and B.A.C.M/N.A.C.M. perhaps felt that a more effective workmen's inspector would not be in the best interests of their respective organisations. Questions from Her Majesty's Inspectors concerning the role of the workmen's inspectors in preventing the accident could lead to reciprocal questions about the role of Her Majesty's Inspectors. Junior officials who held that a responsible person was one who co-operated "in getting on with the job"¹ might view a workmen's inspector, well-trained in the

1 See p157 below

Mines and Quarries Act and Regulations, as an "undesirable trouble-maker".

However, the Houghton Main Colliery explosion resulted from the ignition of an accumulation of firedamp in B05's return development heading, which had been unventilated for a period of nine days. Section 55 (1) of the Mines and Quarries Act of 1954 requires all parts of the mine to be constantly ventilated in order to dilute to specified standards and to render harmless noxious or inflammable gas. A zealous but (from the management's point of view) unco-operative workmen's inspector, looking for breaches of the Act and Regulations with which to confront management, might have prevented the accident by insisting that B05's development heading was continuously ventilated.

Conclusion

1 The role of workmen's inspectors in preventing accidents was not discussed at the Public Inquiry. The explanations could be:

(a) It did not occur to any of the "interested parties" that workmen's inspectors had a serious role to play in preventing accidents.

(b) It did occur to one or more of the interested parties that a workmen's inspector had a serious role to play in preventing accidents, but it was against their short-term interests to consider this role.

(c) The brief for the Public Inquiry was not interpreted as needing to go "so deeply".

2 Even if (a) were right and (b) were wrong, (b) still provides a valid (though hypothetical) example of how individual group interests

THE ROLE OF THE DEPUTY IN RELATION TO THE ACCIDENT

in the mining industry can lead to a failure to consider factors which would benefit the industry as a whole. The Health and Safety Executive must ensure that the overall "industry interest" is not completely lost to sight.

Illegal riding of conveyor belts. I asked a number of workmen and officials their views on this subject.

The majority of the workmen admitted that they had ridden belts illegally, although they qualified their remarks by saying that they would on no account ride where they considered it dangerous. This was another occasion upon which the remark "if you kept to the Coal Mines Act you wouldn't get any coal out" was illogically repeated. I have selected the reply of one junior official as being representative of the views of junior officials.

"I would not ride a conveyor which wasn't a proper way riding conveyor. I did do before I was a deputy, but I am an official now. I admit that some officials themselves ride belts, but that isn't right. If I found a lad riding a belt I'd give him a roasting, but it'd be very hard to stop. I wouldn't say so much to some of the older chaps. You've got to know how to handle them".

This reply illustrates the following points:

- (a) That the official realised the responsibility of his job, in that as a deputy he had to set an example.
- (b) He saw that he had a special responsibility to "the lads".
- (c) He realised the correlation between production and safety, albeit sub-consciously.

A deputy can use the Regulations as a weapon, one of the few in his armoury, when it comes to any "conflict situation" with the men about production. When production is going badly even the most taciturn deputy can become more bureaucratic and 'regimental' in that regulations

CHAPTER XVTHE ROLE OF THE DEPUTY IN RELATION TO THE ACCIDENTIntroduction

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"I would not ride a conveyor which wasn't a proper man riding conveyor. I did do before I was a deputy, but I am an official now. I admit that some officials themselves ride belts, but that isn't right. If I found a lad riding a belt I'd give him a roasting, but it's very hard to stop. I wouldn't say so much to some of the older chaps. You've got to know how to handle them".

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A deputy can use the Regulations as a weapon, one of the few in his armoury, when it comes to any "conflict situation" with the men about production. When production is going badly even the most taciturn deputy can become more bureaucratic and 'regimental,' in that regulations

which are not usually enforced to the letter can be so enforced. The sentence "You've got to know how to handle them" implies that the junior official was loth to enforce the regulations in respect of the "older chaps", probably realising, again subconsciously, that the converse is true and that the adoption of too bureaucratic and regimental a stance on his part would eventually hinder production.

It is not, however, the deputy's responsibility to be there purely for the sake of output. The 1911 Coal Mines Act, Section 14, "laid down quite precisely what are his (the deputy's) duties,"¹ i.e. "to make ...inspections and carry out such other duties as to the presence of gas, ventilation, state of roof and sides, and general safety..." and stipulated that he was "required to devote his whole time to such duties". (In practice he often could not comply with this stipulation, because his district was too large.)

The Report of the Royal Commission on Safety in Coal Mines of 1938 (Cmd 5690) recognised the danger of two officials (one for safety and the other for production) and suggested that "the wisest thing (would be) that the deputy should be in charge of everything that went on in that part of the mine, from the point of view both of safety and of production. They took the view that the two, in fact, were indissolubly linked".²

This indissoluble link has been described as "a marriage", a marriage in which "the safety factor should be the predominant partner".³ I agree whole heartedly with this latter statement, but am worried about what happens when the partners become incompatible and divorce ought to be contemplated. Under such circumstances, the deputy, who in many

1. Mr H. Neal, MP for Bolsover, Official Report of Standing Committee on the Mines and Quarries Bill, Parliamentary Debates, HC, 4th March 1954, Col.242

2. Rt. Hon. G. Lloyd, MP for Kings Norton, *ibid.* Col 244

3. Mr W. R. Blyton MP, *ibid* col 247

respects is like a marriage counsellor who does not recognise the legitimacy of divorce and who consequently underestimates the difficulties of the marriage, is left in an impossible position. If an accident is the result of this incompatibility, the deputy is 'left holding the baby'.

A widespread attitude throughout the industry is that safety, being in everyone's interest, can best be achieved by co-operation. Total co-operation and participation in the pursuit of safety is desired by many people, not only as an effective way of improving standards of safety, but also as a spearhead in the introduction of a more participative style of management.

Junior officials whom I interviewed (members of the National Association of Colliery Overmen, Deputies and Shotfirers) agreed with the one former member of the Houghton Main mechanical engineering staff with whom I spoke that in certain situations they had a duty and responsibility to disregard mining law in the interests of "getting on with the job". They emphasised, however, that this did not mean that they would take risks with the lives of the men. Their major concern was with the possible consequences of their being caught breaking the regulations. The breaking of regulations, however, was not seen as synonymous with causing danger. My impression was that the officials who expressed this view were proud of their job, were dedicated to their pit, and certainly regarded themselves as responsible. Similar opinions concerning attitudes to mining law and to the official's position were expressed to me by junior officials from the Staffordshire Coal Field.

Conditions at Houghton Main prior to the accident

On day two of the Inquiry, Mr Alan Turton, a gate-end supervisor

acting as district deputy, was examined by Mr Nicholas as to his inspections and reports for the 10th and 11th June 1975.

"Mr Nicholas ...Did you make any inspections of B04's district that day.

Mr Turton: Just the tail gate.

Mr Nicholas: Did you make the statutory report?

Mr Turton: I did.

...

Mr Nicholas: You did not make these inspections though?

Mr Turton: No just the inspection of the tail gate.

Mr Nicholas: Did you do this with the knowledge and agreement of any other person?

Mr Turton: Yes.

Mr Nicholas: Who?

Mr Turton: Acting Overman Cyril Musgrave".

Mr Musgrave was normally employed as district deputy, but on this occasion he had been deployed to act as overman. Mr Turton had been instructed to take charge of a team of men taking support materials to the face, but Mr Musgrave was under the impression that he (Mr Turton) was also to act as the district deputy. Neither had inspected both parts of the district, although they were later to claim that the district had been covered by their "combined inspections". Mr Turton signed the statutory report, contrary to regulations, and Mr Musgrave accepted the situation without taking further action.

My personal view is that this episode provides further evidence of the dilemma in which junior officials often find themselves, viz. a dilemma which may or may not be their own fault, but which leads them to break the regulations in order to "get on with the job of running the pit".

Mr Scargill questioned Mr Wright regarding the latter's duties as a deputy at Houghton Main

"Mr Scargill: Have you ever found gas in B05's heading in the past?

Mr Wright: Yes, I have.

Mr Scargill: Can you tell me what action you have taken when you have found gas?

Mr Wright: When I found gas it has mainly been on Monday

mornings and I have switched the fan on and cleared it.

Mr Scargill: Have you reported this fact?

Mr Wright: No.

Mr Scargill: Do you agree with me that one of the requirements of a deputy on finding gas in a heading is to make a report of that fact?

Mr Wright: I have not reported it on paper.

Mr Scargill: But I am asking you a question about your duties as a deputy. On your official reports, preshift and general shift reports, would you not agree you should have reported the fact that you have found gas?

Mr Wright: I had taken action and cleared it.

Mr Scargill: You did not think you should report the fact that you had found gas?

Mr Wright: Not if I cleared it".¹

Regulation 24 of the (Managers and Officials) Regulations of 1956² does, in fact, stipulate that the pre-shift inspection report shall be in the deputy's own handwriting and shall specify "whether or not he has found therein any inflammable or noxious gas or other source of danger and if found particulars thereof." Officials of a colliery near Houghton Main to whom I spoke were each unable to recall the details of the above Regulation, although they were in no way apathetic to their job. They did have a clear idea about what they believed to be their responsibilities. "Our duty is to get on with the job and remove danger and not write about it unless we need help," was the indicative comment of a deputy of fifteen years experience, who also mentioned the phrase "management by exception" as an explanation for these views. Another deputy made the point that some of the older officials found the writing of reports very difficult.

For most deputies, however, the problem of writing a report(s) is less difficult than that encountered in degassing and reventilating a heading, especially one where an exhausting fan has been standing (ie. not running). On the second day of the Inquiry, Mr Colin Markham,

1. Proceedings Sixth Day of Inquiry. Monday 1 September 1975
2. S.I. 1956 No 1758

a Colliery deputy, was examined by Mr Scargill, as follows:

"Mr Scargill: Have you ever received any specific instructions in the method to be adopted to reventilate an unventilated heading when an auxiliary exhausting fan is normally in use?

Mr C Markham: No.

Mr Scargill: ...if you had a heading within your jurisdiction as an under-official where an exhaustive fan had been stood for a period of time do you know as a result of instruction or can you tell me what you would do in a practical sense to reventilate that heading, having the knowledge that the fan had been stopped for a period of time.

Mr Markham: Not having met the situation I would tend to, after making the examination, ventilate the heading for a short stretch of time, which may involve breaking the vent tubes.

Mr Scargill: Do you know if any instruction is in operation at Houghton Main which will stop any auxiliary exhausting fan if the percentage of gas in the air passing through the fan exceeds or is in excess of one and one quarter per cent.

Mr Markham: No, not any specific instruction..."¹

Mr Forrest made an effort to remind Mr Markham that electricity must be switched off where inflammable gas is found on the lowered flame of a safety lamp.²

"Mr Forrest: You know what the law says if you test for gas, do you not, and its relation to the starting of machines, What does it say? If you found gas in your district what would you do?

Mr Markham: If I find gas anywhere I take steps to remove it.

Mr Forrest: If you have gas in a district and had electrical equipment, what do you do first? NO ANSWER.

You would, of course, switch it off, would you not?"

During the tea breaks after this exchange I overheard junior officials discussing Mr Scargill's question on the reventilation of headings. Certain of the officials later gave evidence to the Inquiry, a fact which leads me to suggest that their answers to the examiners did not accurately reflect their knowledge prior to the Inquiry or

1. Proceedings of the Inquiry, 2nd Day, 27th August 1975.
 2. The Coal and other Mines (Electricity) Regulations, 1956
 6 (i), SI 1956 No.1766

accurately indicate what action they would have taken had they been faced with a problem similar to Mr Markham's.

After my discussions with a group of officials employed at a neighbouring colliery it was apparent that they also were generally unclear as to what to do when faced with such a problem, and that their knowledge of the Regulations was sketchy. One of the group, an overman, was much more confident of his proposed course of action than were his colleagues.

He suggested:

"If there was no gas in the general body of air at the site of the fan and its electricity supply, then you could switch the fan on. You would have to be careful that the percentage of gas going through the fan was very small. I would split the bagging at the junction of the heading to begin with so that most of the air entering the bagging was fresh air."

The other officials then agreed that this would be the best thing to do. When asked whether he would seek advice, he replied:

"It's our responsibility to make it safe."

Some time prior to the accident the Area Mining Engineer of Barnsley, Mr C Shepherd, had sent a letter to the colliery managers in the area reminding them that fans were not intended to pass substantial quantities of methane. In the letter he stated:

"Should the percentage of methane in the airstream passing through an exhausting bi-furcated fan exceed $1\frac{1}{4}\%$, the fan must be stopped. Advice should then be sought from the area ventilation branch concerning the re-establishment of the auxiliary ventilation..."¹

The Colliery General Manager, Mr H Widdowson, did not pass this information/instruction to the under-officials. He explained his

1. Proceedings 7th Day, Tuesday 2nd September 1975. The date of Mr Shepherd's letter (exhibit 26) was not given during the Inquiry.

reasons to Mr Scargill:

"Mr Widdowson:... I read the letter. I studied it very closely. The system and instructions that had been given were that we do not run fans when a heading is full of gas and the difference that that letter could have made was it could have given licence, if necessary, for under officials to run the fans and have a man sitting in front of the fan trying to regulate to $1\frac{1}{4}$ per cent with a flame lamp because usually in headings we do not have methanometers, so it would be a rather difficult thing to do... and the only way, of course, in which that letter could have been complied with in full would mean redesigning auxiliary fans and putting in remote indication of the amount of methane within the fan.

Mr Scargill: Or, as you say, by sitting in front of the fan all day doing it."

I believe it is significant that none of the junior officials examined in the Inquiry said that he would ask anyone for advice. All evidently saw that it was their responsibility and their duty to use their initiative to solve "their" problem on their own. In the course of my interviewing them, I also found that many officials believed the Regulations unhelpful as far as solving this kind of problem is concerned. As one deputy put it, "We have to get rid of the gas so we can run the fan to get rid of the gas."

The views of junior officials about reventilating headings can be summarised:

- (a) Some officials could remember very little about the Regulations.
- (b) Some officials believed that the Regulations were impossible to carry out.
- (c) All officials saw it as their job to co-operate and to take responsibility for clearing headings of gas.

The Submission of the National Coal Board

During his submission, Mr Forrest made the following remarks:

"...I think that it is fair to say that when this Inquiry began the general view prevailed that there was a straight-forward and simple explanation for this explosion. The early investigation had shown that B05's heading probably contained gas, that the fan just close to its mouth was defective in that if it was switched on it would produce sparking, and that three men, the deputy Mr Williamson, Mr Copperwheat and Mr Baker, were in that vicinity looking for pull-lifts. It was known that the deputy had tested for gas and that his lamp had gone out twice, and the conclusion was drawn that one of them must have started up the fan, caused sparking and so ignited the gas, causing the explosion.

...at this juncture I want to deal with just one aspect and that is the evidence on the personalities of the three men who lost their lives near the entrance to B05's heading and who are, on the "apparent explanation", responsible for this disaster. The deputy, Mr Williamson was an extremely experienced deputy known to be careful and conscientious in the performance of his duties. We have heard from other officials of his calibre how they would have degassed this heading if the fan had been available to them and the precautions they would have taken. Surely Mr Williamson would have been as knowledgeable and would have acted as they would have done? ...In regard to Messrs Copperwheat and Baker, Mr Gilbert Fellows has told us that he knew them personally and he said of them, "two finer lads never down a pit." Mr Scott, Mr Copperwheat's stepbrother, said of Mr Copperwheat that he was 100% conscientious without any fear of question. He was most competent and efficient and he could not believe that he would take any risk at all...The point I wish to make right at the outset is that taking into account the personalities and characters of the three men who so tragically lost their lives near this heading it would be totally out of character for them to have done what it said that they did. If that were to be the finding of this Court, it would in fact be assuming these men have committed acts of incredible folly in circumstances in which they are not here to defend and answer for themselves. I suggest, therefore, Mr Commissioner,.... that there is no evidence to justify a finding which would besmirch the memory of these splendid men for all time..."¹

My view is that Mr Forrest was using the wrong argument to clear the name of "these splendid men". Instead of trying to prove that they did not switch on the fan, he might more reasonably have said that if they did switch on the fan it was no more than any other conscientious and experienced "pitman" would have done, given the social climate of the mining district.

1 Proceedings, ninth day, 4th September 1975

In spite of the post-accident assertions of some officials that they would have tackled the problem (of degassing) in a different manner, from the Inquiry, from my personal experience and from evidence gleaned during my interviews of officials, it appears likely that "responsible" people in the district would have considered it their duty to clear the gas without delay and without "wasting time" seeking further advice. Pull-lifts were required for a job and the pull-lifts had not been sent underground. Messrs Baker, Copperwheat and Williamson used their initiative to get hold of other pull-lifts. They paid attention to safety, in that they tested for gas and made an attempt to remove this source of danger. (The assumption could also be made that the bags were split in order to try to dilute the concentration of gas passing through the fan to less than $1\frac{1}{4}\%$) These were not the foolish actions of idle and shiftless men, but rather the initiatives of experienced and conscientious "pitmen". In the social setting in which they lived and worked, a good "pitman" was one who 'got on with the job' and 'got the job done'. The tragedy was (and is) that by conscientiously carrying out what they saw as their duty they caused an explosion and lost their lives. The immediate fault was theirs, in that they broke the letter of the Regulations, but the responsibility lies with those who permitted the growth of a climate of opinion in which this breaking of the Regulations was the "only proper course".

CONCLUSIONSThe Applicability of the Robens Statement to Houghton Main Colliery
Prior to the Accident.

The evidence of the thesis is that prior to the accident, the Robens statement was largely untrue of Houghton Main Colliery, where personal responsibility for safety was generally accepted by colliery personnel. I have found nothing to suggest that colliery personnel relied, or were encouraged to rely, "too much" upon state regulation. Moreover, I found evidence that the Robens statement was inappropriate as far as other collieries, in South Yorkshire and Staffordshire, were concerned.

There is evidence that at Houghton Main inadequate attention was paid to statutory inspection and to statutory reports in the period after B 05's auxiliary fan had failed. Had statutory inspections and reports been executed as regulations demanded, the heading would not have remained unventilated. To this extent, the accident was the result of insufficient reliance being placed upon state regulation by the officials.

The Nature of the Inquiry

The characteristics of the Inquiry, which determined 'the truth' as defined by the Health and Safety Executive Report on the Explosion, were as follows:

- (a) the conduct, membership and format of the Inquiry, were dominated by tradition and bureaucracy, which limited the range of explanatory models,
 - (b) it evidenced a general mining culture shared by the participants, which further limited the range of possible explanatory models and encouraged an essentially 'technical' interpretation of the causes and circumstances of the accident, emphasising the role of 'human error' rather than adopting a cultural or administrative interpretation. As a result the Inquiry neglected to discuss the day-to-day 'custom and practice' of miners and officials as regards the observance of rules,
 - (c) it displayed inequitable representation and power, which explains why consideration was not given to the activities and responsibilities of certain parties involved at the colliery prior to the accident and why the shortcomings of other parties were highlighted,
- and (d) it manifested the shared belief that the coal mining industry is able to solve its own problems without outside interference, a belief which also limited the range of possible explanatory models.

DISCUSSION OF THE CONCLUSIONSThe Conclusions Concerning the Applicability of the Robens Statement

My conclusion that Houghton Main Colliery personnel generally accepted personal responsibility for safety is based on the following considerations:

(a) Each underground worker whom I interviewed¹ volunteered the information that safety was the most important aspect of his job. On the other hand, many miners and officials qualified their remarks about safety with almost the same words: "Mind you, if you kept to the Coal Mines Act to the letter, you would never get any coal out". In other words, underground workers are well aware that safety is a central part of their jobs, but are of the belief that these jobs cannot be done without sometimes "by-passing the regulations".

(b) Junior officials expressed the belief that, in certain situations, they had a duty and a responsibility to disregard mining law in the interests of "getting on with the job". (I interviewed officials from two coalfields, South Yorkshire and Staffordshire, and I have no reason to suppose that their opinions were unrepresentative.) They emphasised, however, that they would not take risks with the lives of "the men". The breaking of regulations was not seen as necessarily a cause of danger.² Part of the junior officials' duty, they felt, was to ensure that regulations were "by-passed" only where they considered it necessary and safe to do so.

(c) During the Inquiry, officials were asked what they would do if faced with the problems of degassing a heading.³ None even

1 See pp113-115 above

2 See p157 above

3 See pp158-162 above

discussed the possibility of seeking any advice. All evidently saw that it was their responsibility and their duty to use their initiative to solve their problem on their own. During my interviews with officials, many expressed the belief that the Regulations were unhelpful as far as solving this type of problem (viz degassing) was concerned.

(d) Evidence was found of a similar reluctance to seek advice and to involve others in the filling out of pre-shift inspection reports. Regulations stipulate that the deputy should specify "whether or not he has found...any inflammable or noxious gas or other source of danger, and, if found particulars thereof". At the Inquiry a deputy stated that he did not believe that he should report the finding of gas if he had cleared it.¹ (In the Staffordshire Coalfield I have observed the removal of gas by deputies and the subsequent omission in the deputy's report either of its presence or its removal.) The attitude of many deputies whom I interviewed is summarised by the remark of a South Yorkshire deputy: "Our duty is to get on with the job and remove danger, and not to write about it unless we need help".

(e) Of those whom I interviewed in the Barnsley Area, the majority of non-officials admitted to riding belts illegally.² They qualified their remarks by saying that on no account would they ride where they considered it dangerous. Of the officials whom I interviewed, the majority stated that they did not ride conveyors, since, as officials, they felt that they had a duty to set an example. As regards this aspect of the law, it was apparent, in the interests of industrial relations, that deputies

1 See pl59 above

2 See pl55 above

felt obliged to turn a 'blind eye' to breaches of rules and regulations.

(f) "As far as ever it is possible, I will adhere to Mines Regulations and strictly adhere to them, but...if life is at stake, I...will by-pass Mines Regulations in an endeavour to save life."¹ This statement, given by the Mines Rescue Superintendent, Oscar Wright, in evidence to the Inquiry, is proof of one official's belief, albeit in the special circumstances of a rescue, in the necessity of taking personal responsibility and not relying solely upon state regulation. The evidence which I obtained outside of the Public Inquiry was that deputies identified with the attitudes expressed by the Mines Rescue Superintendent, in that in day-to-day situations they felt they often faced similar problems though possibly in less dramatic form.

Too little attention to statute?

Several additional questions need to be raised as to the conclusion that the accident was the result of the officials having placed too little reliance upon state regulation:

(i) If the importance of adherence to state regulation had been more readily accepted, would underground personnel at Houghton Main Colliery have been generally less ready to accept personal responsibility for safety? (The word "imbalance", as used in the Robens Report, does suggest that more of one, i.e. state regulation, will result in less of the other, i.e. personal responsibility, and vice versa. This view is debatable.) My experience leads me to believe that Mines Rescue personnel are highly disciplined

1 See p111 above

and conscientious, and that during rescue operations they generally place even greater emphasis upon the regulations than they do during routine underground working. However, the case of Oscar Wright shows that a conscientious official is still able to rely upon personal responsibility and initiative, even to the extent of "by-passing" regulations which, I believe, he normally holds sacrosanct. This is not the contradiction it superficially appears, in that though he broke the "letter" of the law he took positive steps to abide by its "spirit".

(ii) If the Mines Inspectorate had concentrated more (or less) upon the enforcement of regulations, would this have led to greater (or lesser) acceptance of the importance of strict adherence to state regulation on the part of underground officials?

(iii) If B 05's heading had been continuously and automatically monitored to the colliery control room, would the heading have remained unventilated?

It is likely that the "National Committee to examine all aspects of the ventilation of narrow drivages" (which was appointed by the Commissioner) will consider the implications of question (iii).

However, further insights into the problems posed by questions (i) and (ii) are, I believe, unlikely to emerge from the official sources in the immediate future, a belief directly derived from the analysis of the nature of the Inquiry.

CONCLUSIONS CONCERNING THE NATURE OF THE INQUIRY

The special "myths and symbols" and the other trappings of bureaucracy of which Marx wrote, are held to have been apparent in the Barnsley Town Hall "courtroom" setting.¹ Such "myths and symbols" tempt one to see the Inquiry as an empirical case of a rational-legal or bureaucratic process. However, given the analysis of the Inquiry offered in this thesis, the concept of a "symbolic bureaucracy" would seem to be more appropriate, since "outside" (state) interference was minimal.

An even more useful perspective by which to view the Inquiry (or indeed any investigation into "the truth") is to regard it as a process of negotiation. Within broad canons, which dictate the acceptability of "evidence" (or opinion), there exists not one truth but a multiplicity of possible truths. An analysis of the factors which determined the nature of the Inquiry helps to explain the accident model adopted by the Inquiry. In particular, it helps to explain why certain of the circumstances of the accident were not included in the model.

In the National Coal Board's submission, it was stated that, "taking into account the personalities and characters of the three men who so tragically lost their lives near this heading, it would be totally out of character for them to have...(switched on the fan)".² However, the official Report failed to offer an analysis of the social circumstances in which such action might be taken. Excluded from the accident model was any mention of the dilemma in which conscientious officials, especially deputies, often find themselves, viz the dilemma

1 See Chapter VII above

2 See p163 above

of marrying production and safety and of balancing their decisions against the demands of state regulation and personal responsibility. Consider also the Commissioner's request that questions relative to the "locking out" of electrical equipment be answered exclusively by the witness most technically competent to answer such questions.¹ The technical knowledge of those immediately responsible for running the electrical department at the Colliery could have been regarded as an important part of the circumstances of the accident.

The order and manner in which witnesses were questioned is important. This order was agreed by 'all the interested parties'², after preliminary statements had been received from witnesses. As a result of these statements, the conflicting and accusatory testimony of Messrs Adams and Irvin Martin³ might, and probably should, have been foreseen. If the interested parties had been more sensitive to the feelings of witnesses like Mr Martin, who questioned the justice of having his reputation put at stake in a quasi-judicial setting, attention might properly have been given to the calling of Messrs Adams and Irvin Martin on the same day. That his own representative did not think relevant Mr Martin's rebuttal of accusations against his good name, exemplifies the Inquiry's comparative unconcern for individual 'justice', when it came to planning the order in which testimony was taken. As regards the manner of questioning, consider Mr Forrest's answering of his own question⁴, thus indicating to subsequent witnesses how he expected such questions to be answered.

1 See p139 above

2 See Commissioner's letter p13, also pp130-132 above

3 See p145 above

4 See p160 above

There is little evidence to show any degree of shared awareness of the 'negotiable nature of truth'. Nevertheless the manner in which experts from outside the mainstream of mining culture were examined¹ demonstrates the industry's shared belief in its unique ability to solve its own problems without 'outside interference'.² Such insularity might be of mere academic interest, were it not for the fact that it helps to account for the Inquiry's neglecting to consider evidence from the social sciences. This evidence would, I feel, have been helpful in further understanding the causes and circumstances of the accident, and therefore in preventing similar accidents. Where the social sciences can help save life, their exponents must be more persuasive in their assault on the 'real' (sic) world, and the mining industry must be more receptive to those outside its physical confines.

1 See pp135-136 above

2 See pp. 26-28 and pp119-122 above

Further Research

(1) In my opinion, some of the observations of the thesis call into question the validity of conclusions reached by Public Inquiries in general. I stress, however, that I see no reason to question the conclusions of the Houghton Main Inquiry. However, with regard to Public Inquiries in general, is it not possible that the process of negotiating truth may, in some instances, yield a truth unacceptable as such at a different time and/or to an Inquiry with different participants? Further research is required in order to find out whether the process of negotiation of truth was evident in other Public Inquiries, and, if so, whether the outcome of the negotiation was ever perverse or misleading.

(2) The evidence obtained suggests that the ideas contained in the Robens statement are generally inapplicable to the mining industry. However, the Robens Committee was dealing with industry in general, and my conclusions cannot be regarded as representative of other than the mining industry. Further research needs to be undertaken into the applicability of the statement to other industries.

(3) It was not the original intention of this research that the role of Her Majesty's Inspectors of Mines be analysed. Nevertheless, during the examination of the Inquiry, it was inevitable that secondary questions concerning the Inspectorate's role would arise. The following observations are tentatively advanced, in order to provide suggestions for further research.

(a) Her Majesty's Inspectorate is recruited from among the most able and experienced mining engineers. This recruitment policy helps to account for the high regard in which the Inspectorate

is held. However, such a policy has its corollary, in that this distinctive engineering and non-social-science orientation helps to explain why members of the Inspectorate are discouraged from involving themselves officially in matters which the Inspectorate regard as 'speculation on human behaviour' and 'conjectural opinions'.¹

Attributable to this engineering ideology is an institutional inability to see outside the confines of engineering in terms other than that of a lay psychologist. (For example, an 'accident' is socially explicable only in terms of individual negligence or inadequacy.)

(b) The Inspectorate's duty as an institution responsible for the enforcement of mining law tends to be minimised, but not just as a result of historical precedence. Equally important is the fact that Mines Inspectors, not unnaturally, see themselves as mining engineers rather than as policemen.

(c) The special position of the Mines Inspectorate also explains the lack of impetus to administrative self-reflection. Not apparently reflected upon are questions such as the administrative implications of prosecuting officials who, in the taking of initiatives, break regulations, or, alternatively, the implications of tacitly approving such regulation breaking.

These observations are not offered as conclusions, even less as criticisms, merely as ideas which were thrown up in the course of research. Nevertheless, there is sufficient substance in the observations for them to be used as the starting point for further research.

1 See p116 above.

APPENDIX I

SAFETY IN MINES RESEARCH ESTABLISHMENT REPORTS

1. Examination of and tests on clothing and equipment.
Author - A. F. Roberts DSc CEng MChem.E.

2. Examination of and tests on self-rescuers.
Author - C. M. Stringfield

3. Examination of and tests on lamps.
Author - S. R. Asquith

4. Examination of and tests on dust samples.
Author - F. R. Brookes BSc M Inst P

5. Experiments with an auxiliary fan.
Authors - K. Billinge
F. Powell

	DOUGLASS	FELLOWS	FORREST	WILSON	TOTAL
	15	(5.13)	50	16	719
	623	(612.87)	1363	256	7780
	390	638	1413	252	2093

6. Calculations concerning the distribution of fire-damp in certain mine roadways.

Author - J. McQuaid
G. Artingstall

7. Experiments with a model of part of a development heading and its junction with an intake roadway.

Authors - F. R. Brookes BSc M Inst P
V. O. Hardy

Taken from the Report on Explosion at Houghton Main Colliery Yorkshire, June, 1975. H.M.S.O. p.26.

APPENDIX II

A COMPARISON OF THE PROPORTION OF ANSWERS GIVEN BY PERSONNEL FROM HOUGHTON MAIN COLLIERY CONTAINING THE WORD "SIR" TO QUESTIONS FROM THE DIFFERENT EXAMINERS

We Compare Five Examiners

	NICHOLAS	SCARGILL	FELLOWS	FORREST	BRASS	TOTAL
Answers Containing Sir	170 (116.82)	68 (111.47)	15 (25.13)	50 (55.65)	16 (9.92)	319
Answer Not Containing Sir	2796 (2849.18)	2762 (2718.53)	623 (612.87)	1363 (1357.35)	236 (242.08)	7780
TOTALS	2966	2830	638	1413	252	8099

Let the proportion of replies containing "Sir" given to Nicholas, Scargill, Fellows, Forrest and Brass be p_1 , p_2 , p_3 , p_4 and p_5 respectively.

- (a) Null hypothesis: $p_1 = p_2 = p_3 = p_4 = p_5$.

The expected values under this hypothesis are given in brackets.

- (b) Alternative hypothesis: The five proportions are not the same.

- (c) We calculate χ^2 and find the value = 51.56

We find from the tables χ^2 for $5 - 1 = 4$ degrees of freedom equals 13.28 at a level of significance of 0.01.

The null hypothesis must be rejected and we conclude that the proportion of answers containing "Sir" is not equal.

We Compare Three Examiners

	SCARGILL	FELLOWS	FORREST	TOTALS
Answers	68	15	50	
Containing Sir	(77.11)	(17.39)	(38.50)	133
Answers Not	2762	623	1363	4748
Containing Sir	(2752.89)	(620.61)	(1374.50)	
TOTALS	2830	638	1413	4881

(a) Null hypothesis: $p_2 = p_3 = p_4$.

The expected values under this hypothesis are given in brackets.

(b) Alternative hypothesis: The three proportions are not the same.

(c) We calculate χ^2 and find the value = 4.97

We find from the tables χ^2 for $3 - 1 = 2$ degrees of freedom equals 9.210 at a level of significance of 0.01.

We cannot therefore reject the null hypothesis. We conclude that the proportion of answers containing "Sir" to these three examiners is equal.

We Compare Two Examiners

	NICHOLAS	BRASS	TOTAL
Answers	170	160	186
Containing Sir	(170.43)	(14.57)	
Answers Not	2796	236	3032
Containing Sir	(2795)	(237.43)	
TOTALS	2966	252	3218

- (a) Null hypothesis: $p_1 = p_5$

The expected values under two hypothesis are given in brackets.

- (b) Alternative hypothesis: $p_1 \neq p_5$

- (c) We calculate χ^2 and find the value = 0.1613

We find from the tables χ^2 for $2 - 1 = 1$ degree of freedom equals 6.635 at a level of significance of 0.01.

We cannot therefore reject the null hypothesis. We conclude that the proportion of answers containing "Sir" to these two examiners is equal.

Mr. G. Collins
President, Yorkshire Area.

The National Coal Board

Mr. W. Forrest
Deputy Director Mining (Selby Project) North Yorkshire Area.

The British Association of Colliery Management and the National Association of Colliery Managers Limited

Mr. J. Brass
Consulting Mining Engineer

Carter Bowden Limited

Mr. S. Stanford
Managing Director, Carter Bowden Limited.

APPENDIX III

Representatives of Interested Parties

Health and Safety Executive

Mr. E. J. H. Nicholas
H.M. Senior District Inspector of Mines and Quarries

The National Union of Mineworkers

Mr. A. Scargill
President, Yorkshire Area

The National Association of Colliery Overmen, Deputies and Shotfirers

Mr. G. Fellows
President, Yorkshire Area.

The National Coal Board

Mr. W. Forrest
Deputy Director Mining (Selby Project) North Yorkshire Area.

The British Association of Colliery Management and the National Association of Colliery Managers Limited

Mr. J. Brass
Consulting Mining Engineer

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Mr. S. Stanford
Managing Director, Carter Howden Limited.

APPENDIX IVEXTRACT FROM ROBENS REPORT PARAGRAPHS 22 and 23

"...Many commentators have drawn attention to the way in which the legislation emerged in remarkably piecemeal fashion decade after decade. None has put the matter more aptly than Sidney Webb who, in 1910, in his preface to Hutchins and Harrison's "A History of Factory Legislation" commented that:

"This century of experiment in factory legislation affords a typical example of English practical empiricism. We began with no abstract theory of social justice or the rights of man. We seem always to have been incapable even of taking a general view of the subject we were legislating upon. Each successive statute aimed at remedying a single ascertained evil. It was in vain that objectors urged that other evils, no more defensible, existed in other trades or amongst other classes, or with persons of ages other than those to which the particular Bill applied. Neither logic nor consistency, neither the over-nice consideration of even-handed justice nor the quixotic appeal of a general humanitarianism, was permitted to stand in the way of a practical remedy for a proved wrong".

This practical, empirical approach has been associated with the development of high standards of safety and health protection, and with the attainment of a degree of systematic official supervision which is probably unsurpassed anywhere in the world. Paradoxically, however, this source of strength is also a source of weakness. It results in a body of detailed law which must be constantly extended and elaborated to deal with new problems. In an age of rapid change in industrial structures and technologies as well as in social attitudes and expectations, this traditional empirical approach cannot keep pace. That it leads eventually to confusion is, we think, apparent on any view of the pattern and content of the statutory provisions and arrangements that have emerged from the historical process."

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